PCT/CA2004/001674

## PCT - Sequence listing for submission.txt SEQUENCE LISTING

WO 2005/026386

PERFORMANCE GENOMICS, INC. <110> Insulin-Like Growth Factor-1 Receptor\_(IGF-1R) Polymorphic <120> Alleles and Use of the Same to Identify DNA Markers for Reproductive Longevity <130> 31649-2137 us 10/662,613 <150> 2003-09-15 <151> 22 <160> PatentIn version 3.2 <170> <210> <211> 4500 <212> DNA Mus musculus <213> atgaagtctg gctccggagg agggtccccg acctcgctgt gggggctcgt gtttctctcc 60 gccgcgctct ctctctggcc gacgagtgga gaaatctgtg ggcccggcat tgacatccgc 120 aacgactatc agcagctgaa gcgcctggaa aactgcacgg tgatcgaggg cttcctccac 180 atcctgctca tctccaaggc cgaggactac cgaagctacc gcttccccaa gctcaccgtc 240 atcactgagt acttgctgct cttccgagtc gctggcctcg agagcctggg agacctcttc 300 cccaacctca cagtcatccg tggctggaaa ctcttctaca actacgcact ggtcatcttc 360 gagatgacca atctcaagga tattgggctt tataatctga ggaacattac tcggggggcc 420 atcaggattg agaagaacgc cgacctctgt tacctctcca ccatagactg gtctctcatc 480 ttggatgcgg tgtccaataa ctacattgtg gggaacaagc ccccgaagga atgtggggac 540 ctgtgtccag ggacattgga ggagaagccc atgtgtgaga agaccaccat caacaatgag 600 tacaactacc gctgctggac cacaaatcgc tgccagaaaa tgtgcccaag tgtgtgcggg 660 aagcgagcct gcaccgagaa caacgagtgc tgccacccgg agtgcctggg cagctgccac 720 acaccggacg acaacacaac ctgcgtggcc tgcagacact actactacaa aggcgtgtgt 780 840 gtgcctgcct gcccgcctgg cacctacagg ttcgagggct ggcgctgtgt ggatcgcgat ttctgcgcca acatccccaa cgctgagagc agtgactcgg atggcttcgt tatccacgac 900 gatgagtgca tgcaggagtg tccctcaggc ttcatccgca acagcaccca gagcatgtac 960 tgtatcccct gcgaaggccc ctgccccaaa gtctgcggcg atgaagagaa gaaaacgaaa 1020 accatcgatt cggtgacttc tgctcaaatg ctccaaggat gcaccatcct gaagggcaat 1080 ctgcttatta acatccggag aggcaataac attgcctcgg agttggagaa cttcatgggg 1140 ctcatcgagg tggtgaccgg ctacgtgaag atccgccatt ctcatgcctt ggtctccttg

tccttcctga agaaccttcg tctcatctta ggagaggagc agctggaagg gaactactcc

1200

1260

PCT - Sequence listing for submission.txt	
ttctatgtcc tagacaacca gaacttgcag cagctgtggg actggaacca ccggaacctg	<b>1320</b> .
accgtcaggt ccggaaagat gtactttgct ttcaatccca agctgtgtgt ctccgaaatt :	1380
taccgcatgg aggaagtgac cggaaccaag ggacgccaga gcaaagggga cataaacacc	1440
aggaacaacg gagagcgagc ttcctgtgaa agtgatgttc tccgtttcac ctccaccacg	1500
acctggaaga accgaatcat cataacgtgg caccggtacc ggccgccgga ctaccgggat	1560
ctcatcagct tcacagttta ctacaaggag gcaccattta aaaacgttac ggaatatgac	1620
gggcaggatg cctgtggctc caacagctgg aacatggtgg atgtagacct gcctccgaac	1680
aaggagggcg agcctggcat tttactgcat gggctgaagc cctggaccca gtatgctgtc	1740
tatgtcaagg ctgtgaccct caccatggtg gaaaacgacc atatccgtgg ggccaaaagt	1800
gaaatcttgt acattcgcac caatgcttca gtcccttcca ttcccctaga tgtcctctca	1860
gcatcaaact cttcctctca gctgattgtg aagtggaatc ctccaactct gcccaatggt	1920
aacttgagtt actacattgt gaggtggcag cggcagcccc aggatggtta cctgtaccgg	1980
cacaactact getecaaaga caaaatacce atcagaaagt acgeegatgg taccategae	2040
gtggaggagg tgacggaaaa tcccaagaca gaagtgtgtg gtggtgataa agggccatgc	2100
tgcgcttgcc ctaaaactga agctgagaag caggctgaga aggaggaggc tgagtaccgt	2160
aaagtctttg agaatttcct tcacaattcc atctttgtgc ccaggcccga aaggaggcgg	2220
agagacgtca tgcaagtggc caacacgacc atgtccagcc gaagcaggaa caccacggta	2280
gctgacacct acaatatcac agacccggag gagttcgaga cagagtaccc tttctttgag	2340
agcagagtgg ataacaagga gaggactgtc atctccaacc tccggccttt cactctgtac	2400
cgcatcgata tccacagctg caaccacgag gctgagaagc tgggctgcag cgcctccaac	2460
ttcgtctttg cgagaaccat gccagcagaa ggagcagatg atatccctgg tccggtgacc	2520
tgggagccaa gacccgaaaa ctccatcttt ttaaagtggc cagaacccga gaaccccaac	2580
ggattgatcc taatgtatga aattaaatac gggtcgcaag tcgaggatca gcgggaatgt	2640
gtgtccagac aggagtacag gaagtacgga ggggccaaac tcaaccgtct aaacccaggg	2700
aactatacag cccggattca ggctacctcc ctctctggga atgggtcatg gacagatcct	2760
gtgttcttct atgtccccgc caaaacgacg tatgagaact tcatgcatct gatcattgct	2820
ctgccggttg ccatcctgct gatcgttggg gggctggtta tcatgctgta tgtcttccat	2880
agaaagagaa ataacagcag gttgggcaat ggagtgctgt atgcttctgt gaaccccgag	2940
tatttcagcg cagctgatgt gtacgtgcct gatgaatggg aggtagctcg agagaagatc	3000
accatgaacc gggagctcgg acaagggtcc tttgggatgg tctatgaagg agtggccaag	3060
ggtgtggtca aggatgaacc cgaaaccaga gtggccatca agacggtaaa cgaggctgca	3120
agtatgcgtg aaagaatcga gtttctcaac gaggcctcgg tgatgaagga gttcaattgt	3180
caccatgtgg tccggttgct gggtgtggta tcccaaggcc agcccaccct ggtcatcatg	3240
gaactaatga cacgcggtga tctcaaaagt tatctccggt ctctgaggcc agaagtggag Page 2	3300

PCT/CA2004/001674

PCT - Sequence listing for submission.txt cagaataatc tagtcctcat tcctccgagc ttaagcaaga tgatccagat ggctggagag 3360 attgcagatg gcatggccta cctcaatgcc aacaagttcg tccacagaga ccttgctgct 3420 aggaactgca tggtagccga agatttcaca gtcaaaattg gagatttcgg tatgacacga 3480 gacatctacg agacggacta ctaccggaaa ggcgggaagg gtttgctgcc tgtgcgctgg 3540 atgtctcccg agtccctcaa ggatggtgtc ttcactactc attctgatgt ctggtccttc 3600 ggggtcgtcc tctgggagat cgccacgctg gctgagcagc cctaccaggg cttgtccaac 3660 gagcaagttc ttcgtttcgt catggagggt ggccttctgg acaagccgga caactgccct 3720 gatatgctgt ttgaacttat gcgcatgtgc tggcagtata accccaagat gcggccctcc 3780 ttcctggaga tcatcggcag catcaaggat gagatggagc ccagcttcca ggaggtctcc 3840 ttctactaca gcgaggagaa caagcctccc gagccagagg agctggagat ggagctggag 3900 atggagcctg agaacatgga gagcgtccca ctggaccctt cggcctcctc agcctccctg 3960 cctctgcctg aaagacactc aggacacaag gctgagaatg gcccgggccc tggcgtgctc 4020 gttctccgcg ccagttttga tgagagacag ccttacgctc acatgaacgg gggacgcgcc 4080 aacgagaggg ccttgcctct gccccagtcc tcgacctgct gatcctcgga cacaccgaag 4140 4200 caggttgtaa caatctattc acaagcctcc tgtacctcag tggatcttca gacctgccat 4260 tgctgcccac gggagacggc ttctctgcag taaacacatt tgggaccttc ctttttcaa 4320 tatgcaagca gctttttatt tcctttaccc gaacccttaa ctgacatggg cctctgcaaa 4380 ccttaatgac aacacttaat agcaacagga cactcgagaa ttgagtctct tcgttctctg 4440 cctttttctc tcctctgcct tccctctctg ccctctcccc ttccacttcc acgctctcct 4500

```
<210> 2
<211> 1373
<212> PRT
```

<212> PRT <213> Mus musculus

<400> 2

Met Lys Ser Gly Ser Gly Gly Ser Pro Thr Ser Leu Trp Gly Leu 10 15 .

Val Phe Leu Ser Ala Ala Leu Ser Leu Trp Pro Thr Ser Gly Glu Ile 20 25 30

Cys Gly Pro Gly Ile Asp Ile Arg Asn Asp Tyr Gln Gln Leu Lys Arg 35 40 45

Leu Glu Asn Cys Thr Val Ile Glu Gly Phe Leu His Ile Leu Leu Ile 50 55

Ser Lys Ala Glu Asp Tyr Arg Ser Tyr Arg Phe Pro Lys Leu Thr Val 65 Page 3

PCT - Sequence listing for submission.txt Ile Thr Glu Tyr Leu Leu Leu Phe Arg Val Ala Gly Leu Glu Ser Leu 85 90 95 Gly Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Trp Lys Leu Phe 100 105 Tyr Asn Tyr Ala Leu Val Ile Phe Glu Met Thr Asn Leu Lys Asp Ile 115 120 125 Gly Leu Tyr Asn Leu Arg Asn Ile Thr Arg Gly Ala Ile Arg Ile Glu 130 140 Lys Asn Ala Asp Leu Cys Tyr Leu Ser Thr Ile Asp Trp Ser Leu Ile 145 150 160 Leu Asp Ala Val Ser Asn Asn Tyr Ile Val Gly Asn Lys Pro Pro Lys 165 170 175 Glu Cys Gly Asp Leu Cys Pro Gly Thr Leu Glu Glu Lys Pro Met Cys 180 185 Glu Lys Thr Thr Ile Asn Asn Glu Tyr Asn Tyr Arg Cys Trp Thr Thr 195 200 205 Asn Arg Cys Gln Lys Met Cys Pro Ser Val Cys Gly Lys Arg Ala Cys 210 220 Thr Glu Asn Asn Glu Cys Cys His Pro Glu Cys Leu Gly Ser Cys His 225 230 235 Thr Pro Asp Asp Asn Thr Thr Cys Val Ala Cys Arg His Tyr Tyr Tyr 255 250 255 Lys Gly Val Cys Val Pro Ala Cys Pro Pro Gly Thr Tyr Arg Phe Glu 260 265 270 Gly Trp Arg Cys Val Asp Arg Asp Phe Cys Ala Asn Ile Pro Asn Ala 275 280 285 Glu Ser Ser Asp Ser Asp Gly Phe Val Ile His Asp Asp Glu Cys Met 290 295 Gln Glu Cys Pro Ser Gly Phe Ile Arg Asn Ser Thr Gln Ser Met Tyr 305 310 320 Cys Ile Pro Cys Glu Gly Pro Cys Pro Lys Val Cys Gly Asp Glu Glu 335 Lys Lys Thr Lys Thr Ile Asp Ser Val Thr Ser Ala Gln Met Leu Gln Page 4

PCT - Sequence listing for submission.txt 340 345 350

Gly Cys Thr Ile Leu Lys Gly Asn Leu Leu Ile Asn Ile Arg Arg Gly 355 360

Asn Asn Ile Ala Ser Glu Leu Glu Asn Phe Met Gly Leu Ile Glu Val 370 380

Val Thr Gly Tyr Val Lys Ile Arg His Ser His Ala Leu Val Ser Leu 385 390 400

Ser Phe Leu Lys Asn Leu Arg Leu Ile Leu Gly Glu Glu Gln Leu Glu 405 410 415

Gly Asn Tyr Ser Phe Tyr Val Leu Asp Asn Gln Asn Leu Gln Gln Leu 420 430

Trp Asp Trp Asn His Arg Asn Leu Thr Val Arg Ser Gly Lys Met Tyr 435 440

Phe Ala Phe Asn Pro Lys Leu Cys Val Ser Glu Ile Tyr Arg Met Glu 450 455 460

Glu Val Thr Gly Thr Lys Gly Arg Gln Ser Lys Gly Asp Ile Asn Thr 465 470 480

Arg Asn Asn Gly Glu Arg Ala Ser Cys Glu Ser Asp Val Leu Arg Phe 485 490 495

Thr Ser Thr Thr Trp Lys Asn Arg Ile Ile Ile Thr Trp His Arg 500 510 .

Tyr Arg Pro Pro Asp Tyr Arg Asp Leu Ile Ser Phe Thr Val Tyr Tyr 515 525

Lys Glu Ala Pro Phe Lys Asn Val Thr Glu Tyr Asp Gly Gln Asp Ala 530 540

Cys Gly Ser Asn Ser Trp Asn Met Val Asp Val Asp Leu Pro Pro Asn 545 550 560

Lys Glu Gly Glu Pro Gly Ile Leu Leu His Gly Leu Lys Pro Trp Thr 565 570

Gln Tyr Ala Val Tyr Val Lys Ala Val Thr Leu Thr Met Val Glu Asn 580 585

Asp His Ile Arg Gly Ala Lys Ser Glu Ile Leu Tyr Ile Arg Thr Asn 595 600

PCT - Sequence listing for submission.txt

Ala Ser Val Pro Ser Ile Pro Leu Asp Val Leu Ser Ala Ser Asn Ser
610 615 620

Ser Ser Gln Leu Ile Val Lys Trp Asn Pro Pro Thr Leu Pro Asn Gly 625 630 635

Asn Leu Ser Tyr Tyr Ile Val Arg Trp Gln Arg Gln Pro Gln Asp Gly 645 650 655

Tyr Leu Tyr Arg His Asn Tyr Cys Ser Lys Asp Lys Ile Pro Ile Arg 660 665 670

Lys Tyr Ala Asp Gly Thr Ile Asp Val Glu Glu Val Thr Glu Asn Pro 675 680 685

Lys Thr Glu Val Cys Gly Gly Asp Lys Gly Pro Cys Cys Ala Cys Pro 690 695 700

Lys Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg 705 710 720

Lys Val Phe Glu Asn Phe Leu His Asn Ser Ile Phe Val Pro Arg Pro 725 730 735

Glu Arg Arg Arg Asp Val Met Gln Val Ala Asn Thr Thr Met Ser 740 745 750

Ser Arg Ser Arg Asn Thr Thr Val Ala Asp Thr Tyr Asn Ile Thr Asp 755 760 765

Pro Glu Glu Phe Glu Thr Glu Tyr Pro Phe Phe Glu Ser Arg Val Asp 770 775 780

Asn Lys Glu Arg Thr Val Ile Ser Asn Leu Arg Pro Phe Thr Leu Tyr 785 790 800

Arg Ile Asp Ile His Ser Cys Asn His Glu Ala Glu Lys Leu Gly Cys 810 815

Ser Ala Ser Asn Phe Val Phe Ala Arg Thr Met Pro Ala Glu Gly Ala 820 825 830

Asp Asp Ile Pro Gly Pro Val Thr Trp Glu Pro Arg Pro Glu Asn Ser 845

Ile Phe Leu Lys Trp Pro Glu Pro Glu Asn Pro Asn Gly Leu Ile Leu 850

Met Tyr Glu Ile Lys Tyr Gly Ser Gln Val Glu Asp Gln Arg Glu Cys 875 880

PCT - Sequence listing for submission.txt

Val Ser Arg Gln Glu Tyr Arg Lys Tyr Gly Gly Ala Lys Leu Asn Arg

890
895

Leu Asn Pro Gly Asn Tyr Thr Ala Arg Ile Gln Ala Thr Ser Leu Ser 900 910

Gly Asn Gly Ser Trp Thr Asp Pro Val Phe Phe Tyr Val Pro Ala Lys 915 920 925

Thr Thr Tyr Glu Asn Phe Met His Leu Ile Ile Ala Leu Pro Val Ala 930 935

Ile Leu Leu Ile Val Gly Gly Leu Val Ile Met Leu Tyr Val Phe His 945 950 960

Arg Lys Arg Asn Asn Ser Arg Leu Gly Asn Gly Val Leu Tyr Ala Ser 975 975

Val Asn Pro Glu Tyr Phe Ser Ala Ala Asp Val Tyr Val Pro Asp Glu 980 985

Trp Glu Val Ala Arg Glu Lys Ile Thr Met Asn Arg Glu Leu Gly Gln 995

Gly Ser Phe Gly Met Val Tyr Glu Gly Val Ala Lys Gly Val Val 1010 1015 1020

Lys Asp Glu Pro Glu Thr Arg Val Ala Ile Lys Thr Val Asn Glu 1025 · 1030 1035

Ala Ala Ser Met Arg Glu Arg Ile Glu Phe Leu Asn Glu Ala Ser 1040 1045

Val Met Lys Glu Phe Asn Cys His His Val Val Arg Leu Leu Gly 1055 1060 1065

Val Val Ser Gln Gly Gln Pro Thr Leu Val Ile Met Glu Leu Met 1070 1080

Thr Arg Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu Arg Pro Glu 1085 1090

Val Glu Gln Asn Asn Leu Val Leu Ile Pro Pro Ser Leu Ser Lys 1100 1105

Met Ile Gln Met Ala Gly Glu Ile Ala Asp Gly Met Ala Tyr Leu 1115 1120

Asn Ala Asn Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys 1130 Page 7

PCT - Sequence listing for submission.txt

Met Val Ala Glu Asp Phe Thr Val Lys Ile Gly Asp Phe Gly Met 1145 1155

Thr Arg Asp Ile Tyr Glu Thr Asp Tyr Tyr Arg Lys Gly Gly Lys 1160 1170

Gly Leu Leu Pro Val Arg Trp Met Ser Pro Glu Ser Leu Lys Asp 1175 1180 1185

Gly Val Phe Thr Thr His Ser Asp Val Trp Ser Phe Gly Val Val 1190 1195 1200

Leu Trp Glu Ile Ala Thr Leu Ala Glu Gln Pro Tyr Gln Gly Leu 1205 1210 1215

Ser Asn Glu Gln Val Leu Arg Phe Val Met Glu Gly Gly Leu Leu 1220 1230

Asp Lys Pro Asp Asn Cys Pro Asp Met Leu Phe Glu Leu Met Arg 1235 1240 1245

Met Cys Trp Gln Tyr Asn Pro Lys Met Arg Pro Ser Phe Leu Glu 1250 1260

Ile Ile Gly Ser Ile Lys Asp Glu Met Glu Pro Ser Phe Gln Glu 1265 1270 1275

Val Ser Phe Tyr Tyr Ser Glu Glu Asn Lys Pro Pro Glu Pro Glu 1280 1285

Glu Leu Glu Met Glu Leu Glu Met Glu Pro Glu Asn Met Glu Ser 1295 1300 1305

Val Pro Leu Asp Pro Ser Ala Ser Ser Ala Ser Leu Pro Leu Pro 1310 1315

Glu Arg His Ser Gly His Lys Ala Glu Asn Gly Pro Gly Pro Gly 1325

Val Leu Val Leu Arg Ala Ser Phe Asp Glu Arg Gln Pro Tyr Ala 1340 1350

His Met Asn Gly Gly Arg Ala Asn Glu Arg Ala Leu Pro Leu Pro 1355 1360 1365

Gln Ser Ser Thr Cys 1370

<210> 3

PCT - Sequence listing for submission.txt

<211> 4973 <212> DNA

<213> Mus musculus

gctcattcat ttccactccg catttctgcc cctcgccggc ctcgcccgcg cccgggactt <400> 3 60 cggaccagtc tcgccaactg cgtcgcgctc tcccgccgcg taggctccgg tggtcgttcc 120 ctccggggat cgggtggcgt ttgtcctcgc ctgcggcgat ttgggctttg ctcctctttc 180 tgtacagttt tcctccttct tctgcatctc tgcgtttgca aatggaggcc gacgacgccg 240 acagcccgcc ccggcgccc ccggcttccc gactccgccg ccccgtgggc cgctgctgcc 300 ggcgctgagg ggccgccccg cgccaccctc cttgtccacg ccgctttccg aggatcgtcg 360 cctgcgctct tgtttttgga cgagagtgag gactgagttg gagacttttt ttttctttt 420 ttcttttctt tttttttt ttttctattt ttgagaaaag ggaatttcgt cccaaataaa 480 aggaatgaag tctggctccg gaggagggtc cccgacctcg ctgtgggggc tcgtgtttct 540 ctccgccgcg ctctctctc ggccgacgag tggagaaatc tgtgggcccg gcattgacat 600 ccgcaacgac tatcagcagc tgaagcgcct ggaaaactgc acggtgatcg agggcttcct 660 ccacatcctg ctcatctcca aggccgagga ctaccgaagc taccgcttcc ccaagctcac 720 cgtcatcact gagtacttgc tgctcttccg agtcgctggc ctcgagagcc tgggagacct 780 cttccccaac ctcacagtca tccgtggctg gaaactcttc tacaactacg cactggtcat 840 cttcgagatg accaatctca aggatattgg gctttataat ctgaggaaca ttactcgggg 900 ggccatcagg attgagaaga acgccgacct ctgttacctc tccaccatag actggtctct 960 catcttggat gcggtgtcca ataactacat tgtggggaac aagcccccga aggaatgtgg 1020 ggacctgtgt ccagggacat tggaggagaa gcccatgtgt gagaagacca ccatcaacaa 1080 tgagtacaac taccgctgct ggaccacaaa tcgctgccag aaaatgtgcc caagtgtgtg 1140 cgggaagcga gcctgcaccg agaacaacga gtgctgccac ccggagtgcc tgggcagctg 1200 ccacacaccg gacgacaaca caacctgcgt ggcctgcaga cactactact acaaaggcgt 1260 gtgtgtgcct gcctgcccgc ctggcaccta caggttcgag ggctggcgct gtgtggatcg 1320 cgatttctgc gccaacatcc ccaacgctga gagcagtgac tcggatggct tcgttatcca 1380 cgacgatgag tgcatgcagg agtgtccctc aggcttcatc cgcaacagca cccagagcat 1440 gtactgtatc ccctgcgaag gcccctgccc caaagtctgc ggcgatgaag agaagaaaac 1500 gaaaaccatc gattcggtga cttctgctca aatgctccaa ggatgcacca tcctgaaggg 1560 caatctgctt attaacatcc ggagaggcaa taacattgcc tcggagttgg agaacttcat 1620 ggggctcatc gaggtggtga ccggctacgt gaagatccgc cattctcatg ccttggtctc 1680 cttgtccttc ctgaagaacc ttcgtctcat cttaggagag gagcagctgg aagggaacta 1740 ctccttctat gtcctagaca accagaactt gcagcagctg tgggactgga accaccggaa 1800 cctgaccgtc aggtccggaa agatgtactt tgctttcaat cccaagctgt gtgtctccga 1860

PCT - Sequence listing for submission.txt	L920
aatttaccgc atggaggaag tgaccggaac caagggacgc cagagaaaa gggacaa	1980
caccaggaac aacggagage gagerreery ryaaagrgar greeraager rouseraan	2040
cacgacctgg aagaaccgaa tcatcataac gtggcaccgg taccggcage cggactaccg	2100
ggateteate agetteacay titactacaa ggaggeacea tetadaaaay tiaaggaaaa	2160
tgacgggcag gatgcctgtg gclccaacag clggaacatg graguageag accessored	_ ·
gaacaaggag ggcgagcctg gcallitact gcalgggerg aagedergga eeeagtatge	2220
tgtctatgtc aaggctgtga ccccaccat ggtggaaaac gaccacata gtggggaaac	2280
aagtgaaatc ttgtacattc gcaccaatgc ttcagtccct tecatteess tagas	2340
ctcagcatca aactcttcct ctcagctgat tgtgaagtgg aactcttcaa ctcagctgat	2400
tggtaacttg agttactaca ttgtgaggtg gtagtggtag ttttaggatg gtagtg	2460
ccggcacaac tactgctcca aagacaaaat acccatcaga aagtacgccg atggtaccat	2520
cgacgtggag gaggtgacgg aaaatcccaa gacagaagtg tgtggtggtg ataaagggcc	2580
atgctgcgct tgccctaaaa ctgaagctga gaagcaggct gagaaggagg aggctgagta	2640
ccgtaaagtc tttgagaatt tccttcacaa ttccatcttt gtgcccaggc ccgaaaggag	2700
gcggagagac gtcatgcaag tggccaacac gaccatgtcc agccgaagca ggaacaccac	2760
ggtagctgac acctacaata tcacagaccc ggaggagttc gagacagagt accctttctt	2820
tgagagcaga gtggataaca aggagaggac tgtcatctcc aacctccggc ctttcactct	2880
gtaccgcatc gatatccaca gctgcaacca cgaggctgag aagctgggct gcagcgcctc	2940
caacttcgtc tttgcgagaa ccatgccagc agaaggagca gatgatatcc ctggtccggt	3000
gacctgggag ccaagacccg aaaactccat ctttttaaag tggccagaac ccgagaaccc	3060
caacggattg atcctaatgt atgaaattaa atacgggtcg caagtcgagg atcagcggga	3120
atgtgtgtcc agacaggagt acaggaagta cggaggggcc aaactcaacc gtctaaaccc	3180
agggaactat acagcccgga ttcaggctac ctccctctct gggaatgggt catggacaga	3240
tcctgtgttc ttctatgtcc ccgccaaaac gacgtatgag aacttcatgc atctgatcat	3300
tgctctgccg gttgccatcc tgctgatcgt tggggggctg gttatcatgc tgtatgtctt	3360
ccatagaaag agaaataaca gcaggttggg caatggagtg ctgtatgctt ctgtgaaccc	3420
cgagtatttc agcgcagctg atgtgtacgt gcctgatgaa tgggaggtag ctcgagagaa	3480
gatcaccatg aaccgggagc tcggacaagg gtcctttggg atggtctatg aaggagtggc	3540
caagggtgtg gtcaaggatg aacccgaaac cagagtggcc atcaagacgg taaacgaggc	3600
tgcaagtatg cgtgaaagaa tcgagtttct caacgaggcc tcggtgatga aggagttcaa	3660
ttgtcaccat gtggtccggt tgctgggtgt ggtatcccaa ggccagccca ccctggtcat	3720
catggaacta atgacacgcg gtgatctcaa aagttatctc cggtctctga ggccagaagt	3780
ggagcagaat aatctagtcc tcattcctcc gagcttaagc aagatgatcc agatggctgg	3840
agagattgca gatggcatgg cctacctcaa tgccaacaag ttcgtccaca gagaccttgc	3900
Page 10	

PCT - Sequence listing for submission.txt tgctaggaac tgcatggtag ccgaagattt cacagtcaaa attggagatt tcggtatgac 3960 acgagacatc tacgagacgg actactaccg gaaaggcggg aaggggttgc tgcctgtgcg 4020 ctggatgtct cccgagtccc tcaaggatgg tgtcttcact actcattctg atgtctggtc 4080 cttcggggtc gtcctctggg agatcgccac gctggctgag cagccctacc agggcttgtc 4140 caacgagcaa gttcttcgtt tcgtcatgga gggtggcctt ctggacaagc cggacaactg 4200 ccctgatatg ctgtttgaac ttatgcgcat gtgctggcag tataacccca agatgcggcc 4260 ctccttcctg gagatcatcg gcagcatcaa ggatgagatg gagcccagct tccaggaggt 4320 ctccttctac tacagcgagg agaacaagcc tcccgagcca gaggagctgg agatggagcc 4380 tgagaacatg gagagcgtcc cactggaccc ttcggcctcc tcagcctccc tgcctctgcc 4440 tgaaagacac tcaggacaca aggctgagaa tggcccgggc cctggcgtgc tcgttctccg 4500 cgccagtttt gatgagagac agccttacgc tcacatgaac gggggacgcg ccaacgagag 4560 ggccttgcct ctgccccagt cctcgacctg ctgatcctcg gacacaccga agcacgcgcc 4620 4680 taacaatcta ttcacaagcc tcctgtacct cagtggatct tcagacctgc cattgctgcc 4740 cacgggagac ggcttctctg cagtaaacac atttgggacc ttccttttt caatatgcaa 4800 gcagcttttt atttccttta cccgaaccct taactgacat gggcctctgc aaaccttaat 4860 gacaacactt aatagcaaca ggacactcga gaattgagtc tcttcgttct ctgccttttt 4920 4973 ctctcctctg ccttccctct ctgccctctc cccttccact tccacgctct cct

<210> 4 <211> 131 <212> PRT <213> Mus musculus

<400> 4

Leu Phe Glu Leu Met Arg Met Cys Trp Gln Tyr Asn Pro Lys Met Arg 1 10 15

Pro Ser Phe Leu Glu Ile Ile Gly Ser Ile Lys Asp Glu Met Glu Pro 20 25 30

Ser Phe Gln Glu Val Ser Phe Tyr Tyr Ser Glu Glu Asn Lys Pro Pro 35 40 45

Glu Pro Glu Glu Leu Glu Met Glu Leu Glu Met Glu Pro Glu Asn Met 50 55

Glu Ser Val Pro Leu Asp Pro Ser Ala Ser Ser Ala Ser Leu Pro Leu 65 70 80

Pro Glu Arg His Ser Gly His Lys Ala Glu Asn Gly Pro Gly Pro Gly 95
Page 11

PCT - Sequence listing for submission.txt

Val Leu Val Leu Arg Ala Ser Phe Asp Glu Arg Gln Pro Tyr Ala His 100 105 110

Met Asn Gly Gly Arg Ala Asn Glu Arg Ala Leu Pro Leu Pro Gln Ser 115 120 125

Ser Thr Cys 130

<210> 5 <211> 446 <212> DNA <213> Mus musculus

aacgaggctg caagtatgcg tgaaagaatc gagtttctca acgaggcctc ggtgatgaag 60 gagttcaatt gtcaccatgt ggtaagaagc caagatgaga catggacaga aagtatggac 120 agaaaggacc accetgtatg teettggcca getaeggaat tgttgeettg eeetteec 180 agtgggtagt ttccccgttg cattcttgcc acccacagac ccttgaggtg ggagcctcgc 240 cctcgccctc ccaccagaac tctgctcctg gctacaggcc ccagcaccac ccagttccga 300 gaggcgtagg tcatcatgtg ggatgccccc ctccccctct gagtcctttt cttgattcct 360 ccaggtccgg ttgctgggtg tggtatccca aggccagccc accctggtca tcatggaact 420 446 aatgacacgc ggtgatctca aaagtt

<210> 6 <211> 174481 <212> DNA <213> Mus musculus

gaattccaga tggaagctga cttcctgctc agccctatta aaaaaaaaca caggctttcc 60 tgcctctgag ccccttcgcc acaaataact tgagtgccat gcacggaggt gcccacttgt 120 ggcttaggtt ctctcagacc ttgtttgtcc ttcagcccct tggggaggag cccaggctac 180 cacctgctgt ccctaagcct aggacccagt ggagaccatc gaattgcaga tttagacaga 240 attaaccatc acagggcctc ataccatcct ttttaaagga ccaggccttg atggagactg 300 cagtcgccaa cccccatggt gcttttgcta ctatggaaac actgaaataa ccaacacac 360 cactggttgt ggatgccact gaacacacac acacacacac acacacacacac 420 tggttgatgc ctctgaaccc caaaaggtca gcctggaagg aatggtggct gctctgtcct 480 ccatctcagc cgcacatctg aagtcacccc agccacaggc acctgtcatt gtcacagctg 540 gtccctatgg gcttactctt tcctcacgat gctcttattt ttagtcagac accaaagcgc 600 tttatttatt tttagttaga cacatttggc acatttcaag ttttccaact tgtattcgat 660 aaagggaaac aaaggattcc tgtcacctgt cctaattgaa agcttctttg ataaatactt 720

PCT - Sequence listing for submission.txt tcggacagtg attcatacta tcagccttcc aaaaggagga aggaaaaaaa aaaaaaagaa 780 aagaaaagag cattcttttg agacactctt attcccttgc acttctgatt tgttttttt 840 900 tttttttttt ttatttcggg tccagagatg gaatggctca aattacattt gacgtcctca 960 ggaaaccata ctcttggtaa aagcagtgcc tgtctcaaat gaaatatggg catggaaatg tgctgccccc tcttggactc acgtctttcc ctacatttct ctcatcagcc agcagttgct 1020 gggagtcagg cgccattggg aaatgcccac tggatcccag agtgtggcct gcctttatta 1080 gtaatgtttt gagtttgccg gaggacagac tcttcatttt attggagccc ctagttgtgt 1140 aaatcttgtc ttgacaactg gtatgtagac agatggtgaa atgcaaggat tctaacaaac 1200 agcctttaga ttaaggtgtt ggctgggacc aacagtaaaa tgagagacca ggcgaacctg 1260 cagtcctccc cagggttcga tgattctacc acattttctg gctgactacc caactctatt 1320 ccaaggcagt cttgatgggg aatgaggctt agcccagcaa aacaagacct tctaaccttg 1380 ctcccggagt tgtctttcct aatttaaaac aaacaaggat gtagtttcct caaagctgaa 1440 tgtggttcta aagtgtgtga aatgtgtgtt gatgggtttt taatgatcct agaggaagct 1500 ggcttctcgg tctttctact taatctcaac attttctaag ccgttcttta gagctgcagg 1560 ttcccacagc agctgcaaga ctgtgtatcc tatcagtcaa agccagatgg tagtcctgag 1620 atggtgggcc attctgttga aaagctttct gtcccctgaa gtttttctcc ctaggaacca 1680 atcctgatga tgggccacga ccaatacact cagcagttgc caggcacagc tggatcccct 1740 ctccagtgct gctacctact ctagaggccc tggggtccag cgacttgatg tagcatcctg 1800 atcttttaca gactggaaag tgtggcaact gagaagtatg cgctgagagt caggtgaggg 1860 actcaaaccc tcagtcatac tccagataaa actgatcagg acgatgctca accctacctg 1920 cagcccaagc tgagatgagg ctcccctcct ctcagtctga catgctagcc tcccccagga 1980 ggaggccaca catttttcat tttagaaata tagatcaaga agaaattgta aagaaagaga 2040 actccttgca aatctcacta gggttgcctg atgctgacat cttcaatgtc caatccaatg 2100 tactaacatc agtacaatta agaaagagag aagcagagag agggggagaa ggaagggaag 2160 gagaacggga tggaggggtt gaggaatgag tatgtgtgca cgtgcacaca gaccgctcta 2220 tacaatttag accagtgcaa ggcttcctgg aattgcctcc acctcaaaac gccttcccct 2280 gctactccca ccttagcttc ttccgcactt tcttccccca ttttaacacg tggtgtcctt 2340 ttcagactca tttggctgta ataaaatatc cagaaaacaa acaaacgaca aaggataaag 2400 gagtttattt ccgtttacaa ttccaggtta cagtccatcg tggtgggaaa gtcagcagca 2460 ggaacttcag agaattggtc gcatcacatc cacagtcaag agcagagaga aatgcataca 2520 tatttgctgt cttgtttgct ttctcatgtt cagcttggat ttctccattc ttttatagtt 2580 caggactcaa tgcctaggga atgacactgc ccatagtgaa ctgggttccc ccacatcaat 2640 taacaagaat tgttgaggaa ttgggttggc ttgtggacat ggttttttt tggaggatta 2700 tcttagttaa gctaattgat ataagcagaa ccattcccta ggcaatgatt ggcctgtggg 2760 Page 13

PCT - Sequence listing for submission.txt

catgtcaaca	tttcctagga	atgttggcct	gtgagtatgt	ctgtgcccac	aagtaagaca	2820
attggctaat	tgatatgaga	aggcccagcc	cactgtaggt	ggtaccattc	cttaggctgg	2880
agatccttga	gctgtaggag	agaggagaaa	tcaaactgag	cacaagcaag	tgagcatgtg	2940
tgcatctctc	tgctctttga	ctgtggatgc	tatgtgactg	ttgtttgaag	tcctgcctca	3000
actttcccac	agtgatgggc	tataacataa	ttatatgctg	aaatgaattc	ctctctcctc	3060
taagttgctt	tcgttgttgt	ttttattaca	gcaacagtta	aagtagaaca	cttatttaaa	3120
acctatggaa	ggatatatag	atagtttaca	gctttagagt	tgttagagtg	gagaacacta	3180
ctgtaaacag	tagtttccag	ttctgagatc	agtggccagg	tgtatacatg	ttactcagtc	3240
cactttcagc	tctaaaaaaa	aaaaaaattg	gggctcagcg	gttaagagca	ctgactgctc	3300
ttccaaaggt	cctgagttca	aatcccagca	accacacggt	ggctcacaac	cacccataac	3360
ataacaaggt	ctgatgccct	cttctggagc	ttctgaagac	agctacagtg	tactcacata	3420
taataataat	aaataaatct	ttttttaaa	tctatcacca	tattgcaaag	tagtgtcttc	3480
cattcctatc	aatatgtgag	acccagtttc	tcattctttc	tttgtttgtt	tgtttaagat	3540
tttatttatt	cattgtatgt	atatgagtac	actgtagttg	tacagatggt	tgtgggccat	3600
catgtcattg	ctgggaatta	aattcagtac	ctccgctggc	tccggccccg	ctggctccag	3660
cccaaagatt	tatttattgt	tagacctttt	: aaatatatca	cataatagto	tttatacaat	3720
agataagtgo	tttctcagta	. ataacctctt	aacagagttt	ttattttta	ttttaacag	3780
agttttaaa	agagccaaca	ttcttaacto	tgtggctgta	tttttgcttg	tcttgtttta	3840
aaacaagcto	ttgggtggtg	gtagtgcaca	cctttagtco	: cagcagatac	tggcagatcc	3900
ctatgaactg	gtcgagagag	caagttacag	g aaaagtcaag	gttacacaga	a gaaaccctgc	3960
taactaagg	t tgagatctgo	tatgtctag	a tggcttatct	gagctcagt	g caaaatggag	4020
gactctata	catctgggct	tccccttct	tgaccttgto	taggggacto	c cctatactct	4080
ctacctggg	a aaggtcaagt	agcctcgga	a gaccaacaa	a cttcctctt	t tccgcagaag	4140
					t gaggaattcc	4200
					t cacactctcc	4260
					a gtagaggtat	4320
					a gattgttgga	4380
					c ttctctccct	4440
					t gtataaccct	4500
					a gtggcatctg	4560
					g attagcaagg	4620
					t tactgggtag	4680
					c ccttccggca	4740
-9-9999						

PCT - Sequence listing for submission.txt gcacctagtg aattccagct gggaagccgt gaaggtaaat cctgccgttt gcccccccc 4800 ccccccccc ccgggccaac ctggttcctt ctgtggctct tgggaaaccc caatgccaat 4860 4920 gcgcgggact cctaagaaac cagagtcacc ttggaaggaa ggcaagcagt gggcccctgg aagaaaggct tgtatttggt cctggaatgg tgtgacttgc ctggtcaggt acttctctcg 4980 tttgtccagg gacactccta ggtgggacca aggcccatgt aggctctact ctacgtaggg 5040 ctagattctt gccctctctt cctttggatg tggggtctgg ggaaagtcat tttcaccagc 5100 tcttgtcctc acctacgcat gcggaagtga taacatggat gtctctggcc tccactgaca 5160 5220 gctcagggtg agggcagcct tgtccacact gctctgtgtg agcccagcat ggggcgtggg tgagaacctg gccagtgctc gtgactgtcg acagcacgct tgcttttgag gacatagcta 5280 accaggagaa gggaagtcct ctgaccgccc actgtgcata ggagggcagg actccctggc 5340 ccacccccac ctccctaggt caactgtctg ccatcagtcc tcatgtgggt gtcacttaga 5400 ggctctgcga attgaaagct gcctgttcgc acttggcttt caacttcaca ctgatgttgg 5460 accaagccaa atgtggggcc tggagtctat tctcagagtt tcccaggcca gctgagaaac 5520 gcagcaaagc tgctagcgtc atgcactcac agccaccgtg gcactgactt tgtggtctga 5580 caacgcagag gcaggcagga gactcttgat ccttgagtta gcatttgggc ttttgctttt 5640 ccaatcataa aaaagcccag agacccttgg actcattgcc aagccttgct ctggtacaca 5700 aggtaacaga gaggccagga ccagactttc atgagctcct ggctttctgc aaccagtatt 5760 tgatcagcag gacttctgcc aagtcctcag tagtcccaga cccttttgtt tctttctgca 5820 gccgtaaaca atggaaaaga gccagactgc ttctggtttc tggtttgcct ctcagtttcc 5880 ccagttgcaa gtagtggcat tcaaaaacct tgctcgagtt ttgatgcctc cgtttcccaa 5940 6000 agttgaggaa gtcacatgac atcccaaaga cctcttgggc atgctgatag agctcacagg 6060 ttgtccattc ccaccaggag gcttttctgt ttgtctggta cacagctgca gacacatggg 6120 atgagggtca gatcagcaca ggaagtggca gaagggagag ggttacctga ggtggttggg 6180 aaaccccagt gcttgggact gctagtaatc aaagtcacct tggagggaag gcaagccagt 6240 gaccactgga agaaaagttt gtctttggtc cttgggtggt gtgacttgac tggtcaggta 6300 cgtcttccat gtgtgcagta aagaaaagtg gctaaggagg ctcaaggctc attaagcttg 6360 gtgaagcaaa ccagacagac acagggactg gggcttgcct gaaggcatat agtcagacat 6420 gcagacagcc aaggatagct ctgaaaagtg cacacacata cacactcaca tgcactatac 6480 acacacaca acatacacta ttcctacaca catataccac aaacactata cacataccac 6540 acacatacac tcacacaca tatacacaca ccacacat atactcacat atactataca 6600 cacacacaca tgcactacac acacatatat acacacatac actctcactc aggagctata 6660 ggctgaggaa agcaagcata cactggaatg gcaggtaagg acaaaatctg tgttaagggc 6720 tggaggtatg gcttagttag tagagaactt ggttgcatgc atgtgggtct gggtaacatc 6780 Page 15

PCT - Sequence listing for submission.txt

ccagcactac ataaaatcag gcatggtgtt atacctagta ctagggaagt agaggcagta 6840 gaattggaac ttcaaggcta tgctctgact gctgcagact ctcatggagt ttttgtgaga 6900 atttaaaatt caaattctgg gtttggcatg gtgacccatg cctttaatcc cagccagcat 6960 tcaggaggta gaggcaggca gattactgtg ggtttaaggc tagcctggtc tgtacagtga 7020 gttccaagac aggaatatat agagagagac cctgtttcag aacaaacaaa aataaaactc 7080 7140 aaacttctta caaagaaatg tgaactatca gttcctagcc taagatcacc tgatacacaa gaaaataaaa taccatgtta aaaaaaatca gtagatgccg ttttaaaaaaa cagaattata 7200 accaggcagt ggtggcacat gcctttaata aacccagcac ttgggaggca gaggcaggca 7260 gatttttgag tttgaggcca gcctggttta caaagtgagt tccaggacag ccagggctac 7320 7380 aaattagaac tatagctgac ttaaaagaca gcttagatct gtggtcagtg aaagatactg 7440 ctcacaagag actgtatcac ttgagtccac ttgcattaat gtccctagta agtaaatata 7500 ttgagagagg aagtaggtta gtgataggct aaggtggaag gacacagtaa atgaatgtga 7560 agtttcctta aagtacattt atttatttgt gtgaccatgt gtgtgtgtgt ctgtctgtct 7620 gtgcacacca tggcttgccc atgaaggtca aaggacaaca ggtaggaagg agctagaact 7680 ctccttcccc tgtataggac ctagggatgg agctcacccc agacatcggg tttgggcatc 7740 7800 aggaaccttt accccgagcc tctcacatac ttctttagga ttctttaggt tgtaattcaa aggctctggc accgattgcg gtgatggttg gttgtataac tcttgatggt gatggttata 7860 taactgagca tactgaaaga tgtggagtta aatagggtaa gtacgtggaa tgtgaataag 7920 7980 8040 agataggtga tagactttac ccacatgtac acatatatag ctgttcagaa acagacgaag 8100 agaaattagt aaactagaat atagatatgg agatattatt caaaggacaa tataaagatg 8160 ggcaaacaag catagagggg ataatgtaaa tagtaaagga agtttctgtt taaatagaat 8220 tccagaggaa aataacagcg agaatggaag aaaaccatct tcaaatatac agctacaatg 8280 tatgggattg gaataggttt ggtcccatag actcctgtgt ttgaatgctt ggcccacaag 8340 aagtggcact gttaggaggt gtggccttgt tggatgtttg accttggtgg aggaagtata 8400 acactgtagg ggcagacttt gaagtctcct atgctcacgc tatgcccatt gtggcacacg 8460 gtctcctttc tgttgcctgt ggatcaagat gtagaactct tgggctggtg agatggctca 8520 gtgggtaaga gcacccgact gctcttccga aggtctggag ttcaaatccc agcaaccaca 8580 tggtggctca caaccacccg taatgagttc tgatgccctc ttctggtgtg tctgaagaca 8640 8700 ttaaaaaaaa aaagatgtag aactctcagc tccttctcca gtgctatgtc tgcctggatg 8760

PCT - Sequence listing for submission.txt ttgccttgct tcctgctctg acaataatgg agtaaacctt tgaaattgta agccagcccc 8820 caattaaatg ttttccttta taaaagttga cttggtcatg gtgtctcttc atagcaatgg 8880 aaaccctaac aaaggcacaa tggttaagaa tattccagag ggactggaga gagatggctc 8940 agtggttaag agcactgttc ttccagaggt cctggagttc aatccccagc aaccacatag 9000 tggctcacaa acatttgtaa tgggatctga tgccctcttc tggtgtgtct aaagactgta 9060 ctcacattca taaaataaat aaatctttaa aaaaatttcc agaactgatg aaatacttga 9120 9180 atccacagag atagaaataa agaaaatcca cacctaaaca tagtagagtt ggagactgca 9240 aaagactgat taaggcttta gagtagccag agaggagatg gcttacttac aaaaatggat actctaacta gtagtctagg gctaactttc tcaaaaatag caatacaagc tcaaaagcag 9300 9360 tacagtaata acctacagaa tgccaaaatt gtagctgctg aacagaaacc gtgtagctag gagatcattc ctcgagaata aggctggggc tggagagatg gcttcgtggt taggagccct 9420 9480 tagcggttat gctcttcctg aggacctgcg tcaattccca gcgcccacgt caggtagttt ccaactgcct ttgatcccag ctccaaagtg aacctctaac ctttgggagc acttgcgttc 9540 9600 ttttttttt ttttaaagaa taaggctgga gtaaaaacat tttcacaaaa ataaatgtca 9660 ggtttactct cagaaggatg acacaagggg actgtaaaaa ggacacttgt cagaagagaa 9720 gaaaattatc acaaaaatgg tgtcttagtc agggttttat tgctgtgaag agacactgtg 9780 aacacagaat tgggggtggc ttatagtttc aggggttcag tccattattg tcatgacaag 9840 9900 aaacatggag gtaggcaggc agacaaagga caggagaagg agctgcgagt tctacatctt gatccacagg cagccatagg agactatatg ctatactgtg catacctcaa gcataagaga 9960 cctcaaagtc actatgggga atgcttgccc catagtgact caatttctcc aacaaagcca 10020 10080 tacctatcca acaaggccac acctcttaat atagtgctga atagtgctgc tccctatgga 10140 ccaagcattc aaacacagga gtctagagtc ttatgagggc cattcctatt ccaaccactg cagatggtat agaaatcact gggaagcctg gcagtggtga cgcatgcctt taatcccagc 10200 10260 acttgggagg cagaggcagg tggatctctg agtttgaggc cagcctggtc tacagagtga gttccaggac agccagggct atacagagaa accctgtctc aaaaaacaaa aaaacaaaaa 10320 10380 gagagagaga gagagagaga gaaagaaatc actgggaaat ggtgagtctg 10440 10500 agggtagada tctgtaccag caccaggcag tgatggcaca cacttttaat cccagtactc aagatctggt ggatgtctga gttaaaggcc agccttatgt acagagtgag ttccagatca 10560 accaaggcta catagaaaaa ccctgtcttg aacatcaaaa caataaacaa acataaagtc 10620 catatcagca ttgtttgtaa catgtaatag tagtagttcg taattccagg atggaactaa 10680 aattcacaac agtcaaaggg tcggtggtct tctccctcca gtgcccctca ttgtcggtga 10740 acttcaagct catctccacc atctcttcag tgacaggttc tggagcaggc tctgctcaat 10800 Page 17

PCT - Sequence listing for submission.txt

cttcttgctt ttaataggac caaaggatgg tgactagaca cacctgcatc ggcacctgga 10860 aagtgaggtt cccgagatgg ctggctatgc ccaggctctt ggtaccccag ttggccttcc 10920 ttttggcccc tggactctag gtcttgcatc tattctccct tccttgtgtt cttcctttgg 10980 acagagttgg ttgcaaactc tttgctgtca atgtgcaggg ttgttttgtc cccacgggtc 11040 aacttaggtt atcctgtgtc ctgtctaaca cctcagtgga ctctatttt ggttcagcat 11100 cttcctattt ggttttcagt agtcactgaa agtgctggca aacagttaac agtgtcttta 11160 gtaggaatgg ttatctaagg gaccatacta ggtaaagggc tgagatactt catatacata 11220 gcataccctg actgctgtaa agatagaaaa acagactgag atgccctaca cagtctgtgt 11280 ctgtataagc tacacacttt ctgtaatggc caacatcaat ttatctttat cccatagagg 11340 gcctggcttg gagcatgtgt tccagggact gaatcatttg aggtaggagt gaatactttt 11400 ctttctatcc tcttgcattc ttccagtaaa attaaagctt atcgctatca tgtatgttcc 11460 caagcaatgt ttaattatct gtaaaaagct ttgtatctga gactgcatgg attacagatg 11520 ggaaaggaaa aaaaagtgtt tatttccaca gtgtctcact tccaagaatg gggtgagcta 11580 ttgacaaacc atcacacgaa gacattttt tttaaagatt tatttattta ttatatgtaa 11640 gtacactgta gttgtcttca gatacaccag aatagggcat cagatctcat tacgggtggt 11700 tgtgagccac catgtggttg ctgggatttg aacttcggac cttcggaaga gcagtcgggt 11760 gctcttaccc actgagccat ctcaccagcc ccgacattat tttttttgtt gcagccactc 11820 ataaatggga gaagaatgtt gaaaggaaaa gaaaatgtag gggctggaga gatggctcca 11880 tggttaatag cactgactgc tcttaccgag gtcctgagtt caattcccag caaccacatg 11940 gtggttcaca accatctgtt acaggatctg atgccctcct ctggtgtgtc tgaacacagc 12000 aagtgtgtgc tcacataaaa taaataaatc ttaaaataga aaaaagaaaa gaaaatgcag 12060 12120 aaaaataata tgaagtctaa aagttcacag cgaaagaggc attttctgca aagttcccaa gcaagtgact ccatgctgtt tgttgatcag cattgtgagc cctcgtgttt aacattgagc 12180 taccccatac tccacaagcc caacgctcct tcagtgacat atgcagcagc tgcatcatca 12240 ttgcccatga tctagattct aagctctagg tgtggtggtt tgaataagga tggctcccat 12300 agactcatgc cagggaatgg cattaggagc tgtggcctcg tggggaggaag tatgtcactg 12360 agggtgggct aataatatag aagttagtac caaggactgg ggtttttgct gccctaggct 12420 ggaccaagtt tcttggtgga atgtggactt tggattagga aaatagttga atggttcaag 12480 tagagcatca caggccatac tggtaagacc atggaagatg gtgctgttgg tgacatgaat 12540 tatggggtac acaggtttta gaggagaaga attgtaggcc tagatttttc aaaccctact 12600 tttaataagg gttcttaaac gctttatcct ctcttctagc ccaccaccca ccagagggag 12660 tggaaaggaa aggttaatag agcaaaggag ggtgtggatc tgtttagaaa aagttctttg 12720 gagcaaatcc aatctgtgtt accaggatat cagcagtaca gttcactcag aacagcagca 12780

PCT - Sequence listing for submission.txt gcagctcgat ccacttgcaa acaccattca tgaatcagca atggcaggtc aatccagaag 12840 aaacctcgag gctctgccaa gtacaaggaa gcagcagcaa gaagctgcca gaaagaacac 12900 caccagaagt tcttttgtgg catttctgtc tatgaagtca tatcaaatga tgactagcaa 12960 agaatggcaa ggcaaggtgc tggtgagatg gcttagcagg taagagcact gactgctctt 13020 cccaaggtac tgagttcaaa tcccagcaac cacatggtgg cttacaacca tcgtaatgag 13080 atctgatgcc ctcttctggt gtgtctcaag tcaactacag tgtacttatg tataataata 13140 13200 ccagtgtcag caaaacccaa tgataaccag caaatatata tatcctttcc aaacatcaca 13260 ttcttgttct ctcaagtgtc agctttagca aaacatcaca tgccctttgc ctagactgct 13320 tctagaaaac caccgtgtat ctgttctcag caaaacatcc tcccacatgt ctgcttcagc 13380 13440 aaagaagcca gaaatttcca attcaaagag tactagtatg caacctagag accattcttg 13500 tgatattttg acaaagatca tgggtacatt ctgctcttgt catgcacaca gacacacaaa 13560 tctgcctgag gttaaataga agagttatga atgaacatct ttagaagatt tgtctctaag 13620 agatttccaa aaagtttagt attgactttg ttgcttggtt attagtgacc atacttatgc 13680 agatctgtaa cgaagaggac caagctaaac aaggaacata cagaatgtac agtttgagga 13740 gaaaaggagc ccagggaagt gtaatggagt caagtccagt gcttgaggag ataaacctga 13800 tgttaaatgg aaaggagaag tggtgacctc aagccaggac tccacctagc taagcttcca 13860 acttctgaga agtaatcaaa gaaaagttta gaactgggtg tagctgaatt accttgaatg 13920 ttagcagcac tcatgagaca gaggcagcag gcaggtcact gagttcaagg ccagcctggt 13980 14040 gtacagatgg ggttccagga cagccaagct taggcagtga aggaaaccac tgaaaacaga aagctggtga agatggattt gaatgaagag gcacattcca ggcccagcag cagcagaact 14100 tggtagcttt ggccatattg ctctggcttt agagtggagg gtacaaaaaa aagagttatg 14160 gaatctccct ccgtgactaa ggaaagctga tggggccagg tgtgtgtcag ggatgtttct 14220 gcatggagac ccagagacct ttgcttaaag ttgtgcaggt aaaaacctgg attgttgtga 14280 tagtttgaat gcttggccac agggagtggc actattggga ggtgtggcct tattgaacga 14340 agcgtggcct tgttagagga agtgtgtcac tgtggaggca ggactttgaa gtcatatatg 14400 ctcaagctct gttcagtgtg acatacattc tccttctgat gcctccagat caatatgtaa 14460 aactctcagc tcctccagca caatgtctcc ttggatgctg ccatccttcc cgccatgatg 14520 ataatggagt gaacctctga aactgtaagt cagccccaat taaatgttat gagttgccat 14580 ggtcatggtg tctattcaca gtgatggaaa acctaactca gacgattgcc ccagaaagcc 14640 cccaagatgt tggatatgcc agagtcatgg gatttgtgaa gagggatgct gttaacaggg 14700 agtggaactg gcccaagaga aataactgtg ttgcagtcaa caaagttgaa aagagttgga 14760 gatctgaaga ctgctttgac atcaggcacg gagatgcaga gtttggagtt tacacagctg 14820 Page 19

PCT - Sequence listing for submission.txt

ttttttggtc ttgcttttgt ccagtatttc ccctttcctc ccttttggga tggtgataga 14880 tatcctgtat atgttggaag tatgtgatct tgattttgat tttattccag atcatagtta 14940 agagcttgcc ataagtctta gaacagactt tggactttta agcagggtta agactgatag 15000 actatggaga cttttgaggt aggattgagt gcatttctgg attatgataa agctacaagt 15060 ctgtggggac tgggatgtag aatgtggtgg cttgaaaaag aatggccccc acagacacat 15120 acttgaatgt ttaaggggta tcattagaag gtgtggcctt gttggagtag gtgtggcttt 15180 attagaggaa gtatattatt gggtttgggg ggtggtgagc tttgggtttt gtctttgtgt 15240 atgcctgtat gaggaggtca gatcttttga gactggagtt acaggcaatt gtaagctgcc 15300 atatgggtac tgggaattga acccaggtcc tctggaaaag cagccagttc tcttaaccac 15360 tgagccatct cttcagtccc gttccaatga atttttgaga agcttttcta gaagtgcctg 15420 aacccagaga gacaataaaa acagttgttc tcaacctgtg agttgagaca cctttggggg 15480 ttgcatatca gatatttatt tacattgatt cacaacaatt gtaaaacttt cagttttgaa 15540 gtcgcaatga aataatttta tggttggggg tgtcattaca acatgaagaa ctgtattaaa 15600 gggtcacagc attaggcagg ttgagaatca ctgcaacaaa agaagaattt tgtgccaggt 15660 ggtagtgcca tgtgtcttta atcccagcac tcaggaggca gaggcaggca gatctctgag 15720 ttcgaggcca gcctggtctt tagagtgagt tccaggacag ccaaggctat acagagaaac 15780 cttgtctcaa aaacaaaaca aaacaaacaa acaaaaataa ggtatttgta aaacataccc 15840 tagatccgtt gtgctaagac ataacagcat tccaaatata catagcccaa gtagccaagg 15900 ggttagagct cttatcagct ttgatgagct tgatataagg ggaatttccc tttatcccca 15960 aagatgaagt ggtcttaacc ttcttgcatg ctgtttgctt gttagttaat aggtttattt 16020 ttattttatg tatgtgtgtg ttttgcctga atatatgctg tgtaccttaa gtgtacttag 16080 tacatgagga gtccagaaga gggcgccaca tcccacagaa ctggagttac agatggttgt 16140 gagctgctgt gtgggtgcta ggaatcaaac ctgggtcctc cagtgctctt aactgatgag 16200 ccatctctcc agccccttcc atgattcttt aaaaagcagt catagtgaag agagtacaag 16260 gttgtgcatc aggacagtaa cacccccaat ccatttctgt aacaagtcag agtaagatga 16320 cagatctttc aaagggacac cagcaactgt ctgggccctt cctgtaggtc cccctaaact 16380 tcactttagt ctggagaaat tccagggctc tcagattact ccagagagct agaaagagaa 16440 gcttttcttg tctcgttttc cgtttgtgtt tataacataa acttttattt atttattat 16500 ttatttattt atttatttat tatatgtaag tacactgtag ctgtcttcag acactccaga 16560 agagggagtc agatctcgtt acggatggtt gggagccacc atgtggttgc tgggatttga 16620 actcgggacc tttggaagag cagtcaggtg ctcttaccca ctgagccatc tcaccagccc 16680 tataacataa acttttaatt tcactgggaa gacattcaag cagaggtccc aagttctatc 16740 actcagaaca catatacaga tctggacata ttgacatgca catgaaatgc aatggagata 16800

PCT - Sequence listing for submission.txt gagagacaga aggatccctg gtacttgctg gccacccaga ctggtagaac cagcaggctc 16860 caggtagctt cccaaccatt tctccatctt tgggtccatt gttgcctgtc tgaatatctt 16920 16980 tgcagatagt ttttagaggg gaaatacagc aagtaagcag aatggtgcag ggtagagcct gcacctggaa agtggagaaa catcctagag agacacagcc ttgcaaggct ggtccagggt 17040 gtgggcagtg tacagctgtg actgcagatg tcagcacaga tgctgggtac ctgattcatg 17100 gcaaccacag gttgggaggg cccctacaga tgttggagcc ccaggtctga caatcccagt 17160 ggggtgattt gtgacgtttg taataagatc agatgtgagg gtagaggtga gagagagggc 17220 ccaggtagcc ttctagacct gtctttggaa tctgagttca gactggacat tttgggggct 17280 catttccaga gtcactctcc tgtgctctgc tcccatattc atgagaagag cactcccatg 17340 ctggcagaac atgaggccca ggaagaagac atggggctct ccataactca accccagaga 17400 cctagtgcca agcaattatt gctcatagca gccaaaaaca tgtaagaaac tgccccattc 17460 tggcgaaaga gtaagatgca tttgactgtg actgtcaccc attgtcagga ggccaaagca 17520 tttctttagc agctcctcga gtcaatgaaa tactgagtgt actgaggacg agggcagctg 17580 17640 atgtcctttc tcatctgtgg tctcagtgaa cagaggtcaa ccaggatcca aaaagcagta ttatgtggaa actcccagaa agaaaccaga aaggagtttg atggtcacga gactggacac 17700 actgccagag tcgcgtggct agcgtcagca aaagttttca agtgacttcc acggaagcat 17760 atttacgacg acgtacagaa gaagggcagc tacttaacag atgcccacct accttttaga 17820 acagctaata agtcacagat gcctgcggta ctcccagaac agaggggcct tagtagtcag 17880 gcctcacaca ggaggcagga agaaaagcat gcaggaatca aaccatagcc taaagtataa 17940 gatgaacatc caggagccta aaccactcta aagaaaatta catagatcct ctatgtaaat 18000 taaggagcag gagagtgagc tttaagttgt ttctgcaggt gcataaatta tgcaggcact 18060 tcaggcccta tggagaactt aaccctcctc ctcagatgct ggctgcacgc ggacttcctg 18120 ccacaggacc cctgctatga agtgagtgca ggaaagaacg ttttatagtg aagatgcctg 18180 agagacttcc aggccaggtg atccaagtca acacctacag tgacaagtct tgttgatggt 18240 ttgtaccctt gaaatattat catgagaagg gcactctatg cctctagagt cttctgcccc 18300 caaccctaaa gcccagtctg atctgagacg agaaggagac agattccagg gaaggcacac 18360 gctctacagt gtctggccag tgttccatag aaccggcaaa gtcattaaac acaagaaaga 18420 actgtaggag atggaacaat gtgttgtgat gacctagatg gaccttaaag gactgctctg 18480 tgtgtgtgtg taactaagga acctgggtaa acgatgcggt ccttaccact cttctatcca 18540 ttaaaatgtt tatcatgtct cttcgtggtg gtgcacgcct tttaatccca gcactcagga 18600 agcagagaca agaggatete tgagtttgag gecageetgg tetetagagt teagggetae 18660 acagaaagac cctgccttga aaccaaccaa ccaaccaacc aaccaatgaa ccacccataa 18720 cccacagatt tttgttgggt gtgcttttgt tggaacctcc ctctctttc tcagttttaa 18780 gactccagaa ccgaagtgag aacagctggg catgttactg tgtgcttggg atcccagcaa 18840 Page 21

PCT - Sequence listing for submission.txt

tggggaagag gagacaagac tttcctggca cttattggta agctagccta acttacccta 18900 ggtgagctcc gggccagtga gagactctgt attaaaaaaa aaaaaagtgg atgttaaaag 18960 acacctaagg ttgtcctctg gcctccacat gcatgtacag acatatgcac acatgtgtgt 19020 gcacacatga ctgtttcctc ttgtttatca cctgtcctta tgatttgaga gaactgtagt 19080 aggctttcag atacagaagt ggattggctt ggttaaaaat cttagttcca ctactggcct 19140 gtgtaaaaga tggggaatct ctgctgagct aagccatgca ctatgagaac agtctctctc 19200 caggccagac ctctacaaaa aaaatcccaa caacaacaac aacaacacca ccaccaacaa 19260 cacctttgca ggaaggtgtt ggtaaaggcc ctagtttaaa aatggtgtta catatacaca 19320 ccatgaagtt cagagagtcc attcgcaaca ttatttgacc ttcagcacga tttgtttctg 19380 gaactttccc accccattct tgcctcgttc ccccaggtcc tggtgactgt tattattttg 19440 tatccatact gttgcacagc aagtgtctag aactttctga atctgcagaa cagactcgct 19500 19560 actgatttaa ccatggcctc ccctcccca cccttcccct ccccttggct tctgctgacc accactctac ttcccatctc tccctcgttg gctgttagct acttagtgga agtggaacca 19620 tattgacttt tgtgactggc ttacttggct tagtataatg ttttcaaggt tcaaccatgt 19680 cattgagtgc accagtacat tcctaaaacc ctggcactca ggaggctaag gtaggggaac 19740 ccagaccaat ggttttcaac cttcctcgtg ttgcggtgac ccccacaacc atattctgt 19800 19860 tcttacttca tagcagtaat tttgctaatg ctatggatca tagtacaaat atttttggag atagaggttt gccaaagggg gtctcaatcc acaggttaag aacttctgat ttagactttt 19920 agttcaggcc aaattacaca gtgagagcct atctcttca tttcctaatt tgaaagaaag 19980 aaagagggag ggagggaggg agggaggggg ggggaaggga gggagggaag ggagggaggg 20040 aagggaggga gggaagggag ggagggaagg gagagagaga gagagaaaga gagagagaga 20100 gaaagaaaga gagaaagaaa gggagaaaga gagaaaaggc taggcgtgat gcagctcact 20160 gcagctctgt gagacgcagg caggtccatg gtcttcccac ttcagccgcc tagtgaattt 20220 gaggccagcc tgagagataa gagaccctgc ctttaaaaaa caaaatagac aatcagctta 20280 gtgggtaaaa gtgtttgtga ccaaagctgc caacctgtgc tggatcccca gaacccacat 20340 ggtggaagga gaaaaccagt tcctgcaagc cctccacgtt gtgagccatg gcatgcaggc 20400 atcctcagac agacagacag acagacaaaa tgaataagta cattaacatg tttaaattaa 20460 20520 20580 gtattagaga caaggtttct ctgtgtagct ctgactgtcc tgaaacttgc tctagggatg 20640 aaatgcatgc accccctcc cccagctgaa actgacagtc tgattcccta ttgtgcttgt 20700 gtttcttacc agttcatcct ctgctggaca cttggatggc atcttctatg ccactgtgaa 20760 cagagctgca agctttcatt ttgggggtat atactcagaa gtgggggtac tgggtcatat 20820

PCT - Sequence listing for submission.txt gaccagtcag agattgtta gtaactacca agttctctac atatttagaa atactattc 20880 20940 tcctccttct tccttccttc cttccttctt tccttccttc ctttctttct ttctttctt 21000 tctttcttt ctttctttct ttctttcttt ctttctttct ttctccttcc tttctccctt 21060 21120 21180 21240 ttctcctcct cctcctcc ctcctcct tcctccttct tttaagcttt atgtgtacag 21300 gtgttttgtc tacatgtata tcttgcacac cagaaaaagg cactggattc catgggacta 21360 cagttacaga cttgggaggc atgggggtgc tggtctttga actcaggtcc tctggaagaa 21420 cagtgctctt aaccactgag ttaactctct ggctccaata tttcatctct ctctctct 21480 ctctctctct ctctctctc ctctctccc ctctccctcc ctccccttccct tcctctctcc 21540 cttcctctct ttcttttta tttttattt ttctacttat tttcaatagc agccacctcc 21600 acagatacaa agttctctga ataggccata aaaatctgag cttactcttg agtaatatgt 21660 ggtgaatgga cggcagagca tggccttctg tcttgcttgg tcctcacaca ggacacaggt 21720 cctcagacag gcccaggacc ctagagctcc tttggggggag gggacacagt ggtgctatga 21780 aagcctgtct tcttctactt actctcagtt cattataaag catttcaacc tgttaatggg 21840 ttccagggtc atactattct gccttaatta aactaatccc cacattatga tcaagaaatc 21900 ccataaaaat gatctgtaac aacatcacac ataggagata aaatgaatta atgtgaatca 21960 cacggaaatg aggaatgaca attcctgtga ccctcccaga ggcccttatc aaccatagga 22020 aaaaaaaaag agctgacatg ttgatccaaa tagaggaaag aattaggaaa agcagttaag 22080 gaaagaaaga ggcccttaca gatttacatc tgcccgataa agcccactcc aaagcaggag 22140 22200 tcttgcatga gtgccatgta ccctaactac agagcagcag gggagagatg ctgaagtgtg cactgtgccc tgtgtcatcc agtcagtggt caggcatgcc acgtcaaaca tttttattaa 22260 22320 cggggcacat gatcagaaat atttggagac agtgactgga tagagagtcc ctgtcattca tcctggatct tccaggcaag actgacacat cagtttggaa gaatcacata acagatactg 22380 gaagagggcg ctggcaagca gcctatgtgg aggatagaac ttgacagcac tcaggcagag 22440 tcacctttaa ccaacacctc aggatttctt cccaagctcc cctctgtatc tcttttgacg 22500 ctgcttcctg aaatgtcttc cctctaattg tgtccctgtg gactttggct gtcccctgtg 22560 taggatgggt ttggtatcga ctgttctcga ggctgcgggg aggagatact tagcagagtg 22620 ccaagagtcc tccaggggca gcctcggatg atgaccggac tattcattaa ctcagaaaaa 22680 aatggtgcct ggaagcatct taccaagtgt agttgttctg cgctcagggt atgctcgggg 22740 tatgtagttg ttctgctggt atgcttccct tctcagagga gttcagttct catggtcttt 22800 gtaacgtcag tgttacattg ttttaatggc tacatcattg ccaccaatgg ctagcctctc 22860 Page 23

PCT - Sequence listing for submission.txt ctctgtctac cagccctttc ctttctcttc ttcagtgctg ggctggaacc caagactttg 22920 ctcatgctag actaggcaag ctactcagcc ccagccttgt tcatggcact gagtgcttcc 22980 23040 atatgcccgg tgagctctcc caggtctggc tttcattgct ctcttcacaa gcctggatgg tgttggatac ctgatggccc ccgggtctct tctctccctt cagggcaagg ggaacatgtg 23100 atctctctct ctctctctt ctctctctt ctctctctt ctctccctt ccctctccct 23160 ctccctctcc ctctcctct ccctctctca ttgttactcc tgcttgtgga gccaagcaaa 23220 gaaaatgacc actgaacagt gaccacgtga caagttgggg aaagataagt agaaaagggg 23280 gcgagaagag gggaagggaa ggagaggtaa gaactatgca aagaaaggaa gaaaaggaag 23340 agaaagggga gggggagaga aaggaagcag ggaggaggac ctctgtacac ctccaaacta 23400 accettcaag atccaaagag catettette cetgtggeec tecageggee eggeettget 23460 caactctcac agcaaccctg agcggagtgc ttgggtctgc attgcaccgg tggggaagcc 23520 gaggcctggg aggttccaac ctttgtctag aagcacctca tcctccgaga agatcagcac 23580 tgacagagag gtcacccacc tgcctctgag ggccacctcc ccagagccca gagaaggatc 23640 ttacctggga tctgtgggcg gccatctaac ccagaaggca tgggggtgcc tggaaatgcc 23700 aggaaaggaa gtcaggaaca gctcaggcag aaatgaaggc acaaaatggg ccccacattc 23760 ctggctgaac tgggatcaag agtgagcaca agcttctaag atctcaggct ttcttccttc 23820 23880 caacctatct gctacttggc ctggaaggag gatgcccaca gccttccctg cctcacctag 23940 24000 cctttcttgt ccccctccc aacaacaaca acaaatccat ggcttttgtt tctaaaatta 24060 tatccgcaca ataacctctc tgccaattcc aggcacacag agccaatgga ccagctccct 24120 ttggataatt caaattgacc ccaagatagc cctaccccac ttgtacctcc tccctttgtt 24180 taagaggttg ctctaagctc tttgtttcct gaccgaaatc cttccatggc ttcctattat 24240 cccagagaag tccacacctg actaagcatt ccacccagcg tctgcagcct tctcaagttt 24300 caatccccat ccttcctggg gtggagtgtc cctgttgtac ctttggtaga gatgactagg 24360 gactcatcag attacaccag gacagttgat gtttggatta gcagcagggg tgtgaggcta 24420 gatgcttatt tgccttgtgg catgcaggac acctgtcagc tgcggagaac ggctcgccat 24480 accaatttcc cgaagggcct cgggctcttg tgcttccttc tgctatgatg ctagcctcgg 24540 ctgctgccac gtgtgttccc agcctcctgc tctggcccat cttcatctgt ccacagacct 24600 cagtgttgca aacatggctt cttcagatat gtctccctag ggtgcccccg cttcaggaag 24660 tacggctgag agagccatgg ctctttggtt cctggtcact ttgagttcct ccataccagg 24720 agggatgggt tggagctcag agaagaccct gggcatacag tcttgggtgc ctttgtgtcc 24780 aggcaactaa ggcacctcac ccgctatatt ttgcaggaac tttctaagct gggcttaggg 24840

PCT - Sequence listing for submission.txt gtggacactg acatagaact tcgaactctg cagctgcctg tggattacag ggaggtaaaa 24900 cggaggctta ccacaatctg ggaagatttt caaccacaag taagtgatac ctggagaggc 24960 tgtgggtctg ggaacctgat gatgggccca gggcctagga actttctgga ccttgatcta 25020 gatttgaagg ctggagtaca cctgaattaa agcttctgtc gtgagattct gggtctgtgt 25080 ataagtttat gctgaaacac gaggtagata gtaaaagatg actgggggca agtgggccgg 25140 acaaaatggg aatctggtat taaagccagg aggactctag gatagctcac acctatccta 25200 aaaaaagaga ggccctggat taagccctgt gtatggctaa ttctggctgt tctgaggaat 25260 ttaaggtaaa gcgctttggg cctaggaagg tctgatgatg attcacccag ggttggtcca 25320 ccttcaaaac atcctgccag gggcctggtg tgatggctca cacttttaat cctggcacct 25380 gtgagtttaa ggccagcctg gtctagttta tgagttcaca gccccattcc aaactaacaa 25440 aagtaactac atagtaactg aatataagca ctgtgtaaac aggggcacaa tgccaggtgt 25500 ggtagctcac gcctttaatc ccagcacttg ggaggcagag gcaggtggat ttctgagttc 25560 aaggccagcc tggtctacag agtgagttcc aggatagcca ggactacaca gagaaaccct 25620 gtcttaaaaa acaaaaaca aaaaaccaa aaaaacaaaa caaaacaaaa aaaggacact 25680 gaccaaacac tgcagcaaaa tcctctgcaa ctgttttcaa aagaggacaa ataaagtcta 25740 ataagattcg attagactgt tgctagcttc ctttatgaaa gtttcattaa atacaggatc 25800 ctgttaaaag ccagcatctc ccagggtcat cttggatact tgctttcccc caactcctgg 25860 ggggaaagag agcacacaac ctcggatgag ccatttgaaa tacaaaagtc ctttttaatc 25920 cagaaaaaat ggggaaaagt ccttaaatgc agatgtagca tgcctaattc aacccaaaga 25980 tgtgttcctt ttgtatcagc accattactt aggggcctaa gcagggctcc tggaggactt 26040 ggagctagat ctgtttagcg gggctctgtc atcactggac ctctcttcac atctagtgat 26100 ctggtgtctg tcctgggatt tctgatatgt atgtccctac agcttgttgt gcatgtgggc 26160 26220 atggactctt ctgccaaggc catctttctg gaacagtgtg gtaagaaccg aggctatcgg gattcagatg taagaggctt ccagccggag gatggagtgt gcctccccgg tggccccgaa 26280 gtgaggctgt ctgttgtcaa catgaaggag gtctgccggc gtgtggctgt tgagaatgtc 26340 gaagtggcct tttcccgaga tgcgggcagg tacttcagga ctccgtgtgc caagtgccaa 26400 acagatggga gagagggatt atccttcaga gtcccttctc tctcctcaag aggctatcct 26460 atgttgtcca tgtggctgct ttggtcacag gcatcctatt tgtcacaggc actgcagatt 26520 aatttaacct cttctccaaa cgctgacagc ccctcccct aagcaccttt cctctcttct 26580 agggataaag aaatacccga ggggagttgg cagtaaggga gtcattgtgg tgaaggtgtc 26640 ttaccactag ttgtttgaaa ggccggctca attctgtcat gaccgcttgc tggtcattag 26700 actctgagcc caagaaccaa tgtctgtctg gagtgttctt aggccatgtc ctttctctat 26760 cagaagagcc aaactcaagt ggtactaggc atgtgggcat ccataaactc atgcttcatg 26820 aaacctgtac ttactgtgtc tggcatcgac aagatctggg agtaatgggg agtttcatgt 26880 Page 25

## PCT - Sequence listing for submission.txt

ggttgcaggt acatctgcga ttacacctac tacctgtctc tgcaccttgg gactgggcat 26940 gcggctctca tccatgtccc tcctctgtcg cactggctct cggccagcct tctgggcaaa 27000 gccttgcgag tcatcatcca agaaatgctg gaagaaatcg ggaaagtcca gactcaaagt 27060 acagcagctt aagggaagca gcagggggat gccttcctta gatgaaatgg agtgtttcag 27120 gcttggacgg agaagccagc tgtgctatga gaggctctaa aaaagggaaa cagttacaag 27180 27240 gctgggggtg ggggtggggg tgggggtgtg gactcacaga atcacaatct tactttagtg 27300 tctaaagcaa gaagaaaatc cccaaaggcg gatgcttcat aaaggattaa ctaggggaag ttatgacctt tgtaactcca aagagccacc aaaacctagt gtcaagacca aatgaactga 27360 27420 atttattata caatgttctc cctgcatgta tgcctgcatg ccagcccagg gcaccagatc 27480 tgattataaa tggttatgaa ccaccatgtg gttgctggga atcgaactca ggacctctta 27540 27600 agctctcagt catcttccct gctttgtttt gttttatttt gagacagggt ttctctgtgt agccccgcct ggctgtcctg gaactcacag aaatctgccg gattctgcaa gaaaatgact 27660 27720 ttacaagatt tcctttgcaa ataaaccaag gacattttac atatgacaga gccaagccac actaaggcag atcaaagccc aaggtggaag ccgggcgtgg tggcacacac ctttaatccc 27780 27840 agcactcagg aggcagaggc aggcagattt ctgagttcca ggacagcctg gtctacaaag 27900 tgagtgccag gacagccagg gctacacaga gaaaccctgt ctcgaaaaaaa acaaaaaaac 27960 aaacaaaaaa agcccaaggt ggactgggat ggcacaggcc accagcacag aacctagctg cttggctggt gccttggctg gagacccctc tctgtgagca aagagctcct gctccaaacc 28020 ttaggtccct ttgttccagg agtgggctct agtgacactt caggtcactt ggcacctggt 28080 cagacacatt aaaagaaaac gccgggcata cgcctttaaa cccagcactt gggaggcaga 28140 ggcaggtgga tttctgagct caaggccagg gctacacaga gaaactctgt ttcaaaaaac 28200 28260 agaggcccag accccaaccc ccatgagcag ctcttccacc ccctctgcgc ctctccagtt 28320 tctcaagacc ctaagcgccc atttgcattg tattttttgt aaatagcttg gcatccccg acaatacaca ctgcatcctg ttcagtcaca gctgatagtg ggtggtttgt atgcttgcga 28380 gccagtgtag aacactgttt ttttgctggt catttaatgg ttgggaggtc tgaagcatgg 28440 28500 ctctgtgttc atctataaac ccgactaata aaaagtcctg gttctgacta cccagagaat gtgtcaccaa caacacacca gccaaaaaaa ggaaagaaaa aaaagaaaaa ggtgtagtat 28560 28620 ggtgaggtgg gtgggcagca gtatattatg aatctagcta gtaagcaggt gtttaaaaaa 28680 acgaataata aattaattct agaacgctcg taataggtga cttagctggg caggggtggc 28740 acatgccttt aatgacaaag ctccgtagga aggcaggtgg ctctctaagc tctaggacag 28800 28860 cctggtctac agagcaagtt ccaggtcagc cagggctaca cagagaaacg atatttcaga

aagattaaaa a	PC aaaaaaagtg	T - Sequence tctcagactc	e listing fo	or submissi acctaactta	on.txt aaaaaaaaaa	28920
gacttaattt 1						28980
actggagtta						29040
gagagcacac (						29100
tctagtacct						29160
atcccgagtt						29220
gaaatctgat						29280
aataaatctt						29340
ggctccggcc						29400
gaaataagac	cttcagcgtc	atctagtgaa	gctccctggg	catctggtaa	acaaaacccc	29460
cggggcagga	cgagattgga	aggtgtgctc	ttccaacgac	cttttgacta	taaatccaaa	29520
tacccattgg	gttaggctac	tgggaggctc	actgggtctt	gagttgcctc	tgatttgctt	29580
ctgccaccta	tgtctcatcg	atcagttctt	cacccggtgt	cctgattttg	tcactgagtt	29640
ccccattct	cagtgttcag	tgaggcggct	acctactctc	ccaggagtct	agaatgtatg	29700
gcttggttga	ttttccaacc	caaaccattc	atcaccttcc	catggcaaag	atggagagcc	29760
agcatctcag	agttacctgt	gggcaaccta	acgactcagc	accttgcagc	caggaacagc	29820
ccgattttcc	ttggttctct	ctccagcacc	ctcaggcacc	ccaactgtga	agcactacca	29880
aggacaggaa	aatgcacgca	gcacgcaagt	ttctggcaac	cccgccccac	ccccagactc	29940
acacatacca	aagccaccct	ggccttttgt	caacccaagg	tccaggggcc	aagcctgtga	30000
agcagccctg	agacttgtgc	ttcatgcctc	ctgattttcc	tctagctgag	taagtgaggg	30060
					ctgtcagttc	30120
tcgtgctgag	cattcccgag	tgacacacac	acacacacac	acacacacac	acacacacac	30180
					gcattcctga	30240
					ggaagtgggg	30300
_					gaattctttt	30360
					tagactcaag	
					gtaaagaatc	
					a aacattgaat	
					t tttaggaata	
					ttttttagac	
					c attattggcg	
					c ccagaggtag	
=					a caggggttgt	
caccaggcag	gcacctact	c cacctgtac	a tgtgtctgc Page :	a cactgccca: 27	a cacccacaag	30900

PCT - Sequence listing for submission.txt

aaactgaaag accaaaccaa acccacaaat ggttcccaga cctttttcct gcagtgttag 30960 aaagttccat gtgttttcaa caacggtatc ttgtggaacc agagagacat ggccaataat 31020 gcacggggag ccaaaggaca tggatcttaa tttgaaaaaa gggggcgagg ggacacacat 31080 tgtggttttt gttaccagtt tgttctgtat tagaaaacaa tggaccttcg gcgttcgcca 31140 ttagatacag gtaggcacag cattcgttag gatctgaggc acatgtgccc acgggctgca 31200 31260 catcagagtc atgtgatcac tgtgaagcca ttccagtgtc ctgaaaccct cccatctcca tagtgttgca gagctaggac cagccatacc agccagatgt caccatggag tgccatctct 31320 ttgctgggtg gccacacat gctatttcca tggccagcag ttctttccat ctgtttgggc 31380 tgctacactc cacagggaac agtgagtccc agataattcc tttccccagc aaagggttcc 31440 aagatcaaga tactgaagaa tacagaagta ctttttaaac cactggcatt ccttttgttt 31500 tgtttttatt tttatctgtt ttatttttt ttgttttatt tatttattat ttatttttt 31560 acaaactaga gcagaaagca tgtgggaaag agggtgaacc acaattggtc ctggggagaa 31620 tttcttttta attaattttt ttaagttttt attttttatt tttggcatat tgtaaagcta 31680 31740 gctagtaaac aagtgtcaaa aaagaaaaag gaaacaaaga gggggaaaaa agaccacaaa cacatatttt tgcacacaca gagagaaaaa aaaagtgttt ttaaattatt ttcggcaatt 31800 ataaactaca aacattttat aaaattattc tatgttctta caaaaatgca atgaaacatt 31860 gaattagttc ttgtaaacca gagcttcgtc aacgactacc cgtaatctac tggacttaga 31920 31980 agccctattg aaaggataat gagtaattta aagaatggtt tactggaaag atgcagacac aaatgtggac acacaaatca gtgattatga agttctcaca gaaaccaaaa tcaaatcaat 32040 ccctaacgtc atgccccaga ccgacaactc atctgatgag tgtgatggag tctgagtcct 32100 tccgcacgtg acttagctct aaggagaagt ttccagagca ggatgccaag tgtcttatct 32160 32220 gaaaccaaat gcccacagtt gactccccag cctccacatg ctctgacacc ttcagacacc atcaagtcca aatatggtcc atgcttcttc caggcccttt aaccctctgt cagcaattcc 32280 32340 cgtcatgtca cgatgccggt taccaagggt gcctactgca ccgtcactct gtcatcccat caaggaatgt tcgtttctct aaatcgccaa ctggtcatcc aagctggaag cccaaagcaa 32400 agacccctgg cctgtccaag gtctgtatct tcagcatctc tggcaagaga ggttcaattt 32460 tacacagaca tcctgtcttg aagttctcat ttgtaccacc acctagttca aagtggactg 32520 ttaaaagttt gaccatcatc actggttctt aaggggtgga tctctctggt ccaggtctcc 32580 caatgcagct gcttagccca ggaaatgaaa agacatcaga caaacataaa agtaacatta 32640 aaaacaaaaa ccaaagggaa aaaaaaaatc ccaaaccgta aattcattac tgctaaaatg 32700 ggccaaagca ttttgatgga gtggtcctgt ctcctcctgg atgccagtgt ttaggaaagg 32760 agatgctttc agcactctgt ggccactctc agaggaccca acgatgacaa cagagggcct 32820 tgggtaagca tcctagactc ctcacccaca tgagctcagt gtgaccttgc caccactgct 32880

PCT - Sequence listing for submission.txt tgcttacctc aggcacaggc actgccaaaa gaggtgggct gctaaggccg aggctccggg 32940 agctcaggct ggcttaggac ttggcatcat acagagctca tccatctgtc agcccaccct 33000 33060 aaaaactcct gtataccact ccgccatctg ctcgtctcac cgtgatcgct tttctagttt 33120 atgaagctgc ttttcctacc gttgaacagt cccgagtcat aagaaacagg caggtaggaa 33180 aaagagcaac cttgaacagt cttttatatc tcaaggaggg agcctcatcc catctctgaa 33240 tccaatgtta ggacattcct gaaaggagat ggcgaagcgt gggccccacc cagctcaggt tcagctctat ctccacgcct caggaagggc tgtgtggggg cacacctgga tgttcacgtc 33300 acctgcatgc tgtgcctcag tggttcatgt gacttcaagc agtgtgagct cctatcagaa 33360 gggggggttg ggtgggggtg ggctcgagtg aaaaaggcca cgactcagct tggtaggagt 33420 acttgaagct tgtaaagaga aaaatcagga agaggcgggg aacatcagca tgagatcagg 33480 ctagaactgt ggatatgatg ccttgcaata gtcggggcgc gtcagtccag cagaacgact 33540 gcaccctcgt acaagccaac cttttctttt tattgaagtg tttctggagc attagtttat 33600 gacggccact acgetgttgg tgccgtctct ctacttaaag gaaaaaaaa aataacaccc 33660 acgcaaaaac aaaacaccaa caactcggac agtttcaaaa ataataataa taaggaaaaa 33720 aaaaaaccct taaaatcaat tgaatgaact gtagaaatcc agttgtggaa aaccggcagg 33780 33840 tatgtgcgag aggataggcc actatcccag agtgtcacct acagtgtaga agaaaaccct gatcaaacag tatctcccag tgaccctgtg agcatctagg aacccagaga agggcagcat 33900 33960 tccagcagga ggcgaagggc tcctgagctt aaccgaactg ttaggcagtt tctccatact gggggaaaag attagccacc gcggtcccca gctgaagtcc ccagggcctg taagagcagc 34020 34080 tgctggagtt gaggattgca ctgtccacct gtgagcagca gacggatggg tggacagagg cagagcacgg ggaaggctag gcgccaacca ctggccttcc agcctcaaga tttggtcagt 34140 ccttgtttag ccctgggggt tgcggggggg gggggggaag ggagggaaga agagggaagg 34200 acagcagcct gcagggggca caggcttcgt cttgccccct tttttatact ggccttctgt 34260 34320 cagaagcaga agggggagct ccctgaccgc tgtacctcca agaggaacca atgccaggag agcaatggtg gcatgcccct gcctcggtgc aggtctcaga ggagcagctg agggggctga 34380 cagggcaccc tgacatgtgc acacattggg actctcaaga caacctacgt gtgggtgcct 34440 cctgccctca aaacctggga gtacctgctc tcttagggat agaatttgtc agtcattcaa 34500 34560 tctgtagaga aagttctgtt ccaaagtcag ccagctgagg atgggccggg gagcccccct ccactggcgt gctgtgctca tggtgactgc tgggttgaaa agtaggggac caggtgagga 34620 gaaagaccag agttgcccta ggaaaagtgg gcttttggag acagagcagg aagaggctgc 34680 tcatttgagt tagcgttgct ttaaccccag aatccagcct ggcccctctc tgcttcacct 34740 gggtatgtgg cctgcggagt ggctgaggtt accaggatca ttggcctact gtcaggtact 34800 34860 acacatgaaa aacaagagtg aggtagataa atgtttgaaa aacaagcccc cccaaaaaaa 34920 Page 29

PCT - Sequence listing for submission.txt cccccaaaa ctgtcccatc taatacacac atacacagag atacatgtac cctttcctca 34980 gcatttaaat ccataacagg ggcttttcta cagtgattaa aacaggtatc acaaaataaa 35040 ttaaaactcc tacatgaaat accttcttaa taagcttccc ccctcctttt ccctttaagg 35100 gcagaggcta ggaagagcca caagcctgaa cctacagaca agccagacaa ctccagcttt 35160 ccttcctgca tctaatctcc agtcacaact gcaaccatca tcatccaaca gttttcctac 35220 tcctaattta aatatttcca cccagaagca tctctcgcgc tgtcactgct ctggtaagaa 35280 gtgctaaatc gaaacaagac aggacccctc ccccaacccc actccagggg gaggggcctc 35340 caagcccaga gctccgggat tctggttaag gaggaacagc aaggggctct agggccactg 35400 tagggtcagc tctactccac tttgggattt ccggcccggg agtgggcttt atagcacacc 35460 cactaaagtt gctgctcctg gccatgggga gttggtgtct tacatcttgc tcccagggag 35520 gccacccctt cagacaagct ggttctaaag acaggtgggc ctgcttgtga aggaggtggc 35580 agatgggcca ctggaccagc tctgctgcat cctgggggact cagcagctat tgtgtgtgtg 35640 tgtgtgtgtg tgaaagatca aatattcatt taaataataa tccaatgact attgtctgca 35700 gttaaaactg ctattgtatt cccaaattgg ggtgtgtgtg tgtgtgtgt tgtgtgtgtg 35760 tgtgtgtgtg tgtgaaccaa agcaaggaga gaaagcaaag tgtgactttc aacaacaggg 35820 actagaaaca ctaaaccagg atgtgtggga tttttaacct ttttgtttct gacctgagtt 35880 tgtggcatgc cttgccctgg agcagatgct gtgtgcgggg aagcaaggaa aggagagagt 35940 agggcccagg agtctgtggg ctctggactc ccaccctccc cactccctca cctgtgactg 36000 tgctcacaga gcctatgggt tagagggtaa tgaatggggc tgcagggagc aggggaaggg 36060 agatgtattt ataaaaaagg catcaaacag ttcacggcaa gttatgtcct agaagcatca 36120 gttgccggag aagaggaaga aaaaccacac tctagtgata agcagaggaa gtttcttgga 36180 gtgagcagaa aggaagaagg ggtagacctg aaagtttcat agattaaatc cacaaagata 36240 aagaacaaaa aaaaaatagc agcttttctt ttcctgtaca gatgtataga tgaatatctg 36300 aactgtaaaa aagttataaa actgacatta aagacgatgt gtatgcaaat gtttcacggt 36360 ctaacataga actgagagac ccatgaagaa gtcctagtaa cagaccatgt gaaagctcac 36420 actgcttgga tccactgcct gggcgggcgg ctccaggctg ctgtggctct gaatcccttc 36480 ctcgaacatc cataaccaac agccaggccg agtccccgga accctttcga gtgtgtggcc 36540 ctcaggggag gggcaggagg gaggtcgggg agggggacga ggctggtgtg aggaccacct 36600 tgacccacaa cctgaccttc aagcttgccc atggccactt cctccagaat tcttggggtg 36660 ctgtgggtgg gggaggggtg gagaaccagt tctgctttcc ccttcttcaa ggagggcgag 36720 ttccatcttg tccagttctc ccaaacggta accatgcaac gagacccagg agatgtgggc 36780 tgggagagcc gggcacagtg gggggcctca gcacgtgtct ctcaaatgtt atcatcaacc 36840 agacaccatg gttcatccca cgcctctgga caaagggaaa tcagcgcagg gagtatatgc 36900

PCT - Sequence listing for submission.txt gtgtgagaaa aaccaaaccg aaaacaggat tttggcaaaa atggcagcgt gaaaaatgat 36960 agccacggat gaacaatggc ccttttaaat tttggggtga ccctaaaaaa ggttaaaaaa 37020 37080 cctacggtgt caggcaggtg tatgcggggt gatgaggagc cccaggggca gccattaagt 37140 37200 caatctgatt ttttttttt ttttaaaaaa gaaggcttcc cagatgggcg ttcacaaaca tttttccact gtaaagcaga aaagagagaa aggagagcgt ggaagtggaa ggggagaggg 37260 cagagaggga aggcagagga gagaaaaagg cagagaacga agagactcaa ttctcgagtg 37320 37380 tcctgttgct attaagtgtt gtcattaagg tttgcagagg cccatgtcag ttaagggttc gggtaaagga aataaaaagc tgcttgcata ttgaaaaaag gaaggtccca aatgtgttta 37440 ctgcagagaa gccgtctccc gtgggcagca atggcaggtc tgaagatcca ctgaggtaca 37500 ggaggcttgt gaatagattg ttacaacctg ctctccctc cccgcccccc cgcccaccga 37560 gtgggcgcac acacgttact gttggcgcgt gcttcggtgt gtccgaggat cagcaggtcg 37620 aggactgggg cagaggcaag gccctctcgt tggcgcgtcc cccgttcatg tgagcgtaag 37680 gctgtctctc atcaaaactg gcgcggagaa cgagcacgcc agggcccggg ccattctcag 37740 ccttgtgtcc tgagtgtctt tcaggcagag gcagggaggc tgaggaggcc gaagggtcca 37800 gtgggacgct ctccatgttc tcaggctcca tctccagctc ctctggctcg ggaggcttgt 37860 37920 tctcctcgct gtagtagaag gagacctcct ggaagctggg ctccatctca tccttgatgc tgccgatgat ctccaggaag gagggccgca tcttggggtt atactgccag cacatgcgca 37980 taagttcaaa cctaagggag tgatggggaa gaaaggaatg agctgccaga gagacccaga 38040 agaactgtac cacctctgca ctctctgctt cccatctgga tgcctctggc atcctgccat 38100 gtatcttgcc cagaacccag gcccagccac agtgccaagc ccagactcac ttcaagtctt 38160 ggttcaccga ttccaccatg gacggttgta ttaatgatag cactgctaag agataaaacc 38220 cacttcctgt ctaagcacct cttctggcca cacattaacc agaagaggaa acctctctct 38280 ctcactaatg agaatcacag ctttcctgac aggcaccatt ctctgtatct cacaccaggg 38340 38400 ctatttctaa gtttcttcct ggcaccaggg cgcccctggc agtgggcctg agggaggagg cggcaggggt gctagacaga cggagcacat atcccaagct tgctatctca cgccagcacc 38460 tgctcactga ggatgtccca tgaaggaaga tccctgtctt gaagatgtag gatgcccagg 38520 agcagagttc taatagaaac ttcaagtcgg atgccaacga accaagggaa gtcctaagca 38580 tcattttctt ctacaaacaa ggccaaggta aaaacagtat aaagcccatg acgtacctcc 38640 atcactccca caaggtcaca aacctttgca aagcttcctc gtcctcgaga gttacatggg 38700 ccagctggca cacaggacag aagagaaagg ctgctcatgc agccaccgtc ctgaccagca 38760 aaggcctggg agtagacagt ggaggagacc ctaagcaagt gaaggtgtgt attgctgaca 38820 cgtgcaaggc catgtcaagg accccaatgc cccagtccca tgggagtggc aaagtctacc 38880 ccagtgatgc ttgcttagag agatggtaaa gccttcccct gaggtccgag ttgcaagtgc 38940 Page 31

PCT - Sequence listing for submission.txt

tgacagtgtg tgcagaatat gtccactgtc acgtccttcc cctggaagtt tacagcctca 39	000
	9060
agacggcttc cctgcagaga tggctaaacc tgcctccatg ctdagotgca caraansaa	9120
ctgcttcctt gtttatctyc atgcagtaat ctgcctccst gtstaaan g	9180
catactgage trecagagee caytecatge agreeteger territories sungegeneral	9240
ctctttgttc attcccttga tyccctcgtc aagtcatage totgodates aggressy	9300
gtgaaccaca cctgggctct gacggatgga cagacacaca ggottgatag additions	9360
cagggtggtc atgattctga gggadagggg tacctageng eteleanten enggis	9420
agaccaaagc actiticacc tatgetiette taggaaactg tgtttutaa aansta 55	9480
ctcaacagac gctttacact addacccaca aatggaagtt cgaacacaca ggaart	
agcaccetga acaggettet adcattetae caggetgate actggggeda caggara	9540
ctttacaaag caaataatcc cacaggggta aaggegegeg addgeddeel deeggess	9600
atgaagttgc ctgtgcagag adagctacte ttgcccatct ggccagotta coggs	9660
gtaggatcaa gtcaggccag gtggaaggta gttatettaa aactgaaaaa agg-g-	39720
gagatecace tecaagaatt adjeactery gaggeedagg gradugudu samasa g	39780
cggagccagg tgcagcttgg agcctgttgt tagtggaatt gtactagage agag tg	39840
acacagcacc tgtggctgtt tctaagctcc tttgtaggct gagtagttga gacagcggct	39900
gtttagctag gaaccttaca atatttactg cctactcctc tggaggtaaa gaaaaatccc	39960
	40020
ggtattctca ctggctctaa gtgactggtc ctagtggcac atgacaggtt gcaggtaggt	40080
	40140
tccaatgatt acaacacatc ctcattgtat gcataaggga aaagcaccaa ccacagcatt	40200
tgatcatttg tctgaagtca cacagggagt gagctggaac ggcgtgaggc tgtcagacaa	40260
tgcagcttta ctgtaagtaa ccatggtctt gctagcagac ggcgctctcc cgactgtcta	40320
cagacagtca gatctcctga gccggcttgc tctggttagc tgctgcagaa gcttgttctc	40380
cccggtcccc atcatttccc gaaggattaa tcggaatggg aagcagacac aaggagctta	40440
gctccgtggc caggctgcaa tttcctctct ggctgacagg cctagccctg aatagaaaag	40500
tgcaaccggg ggcaagaaca tgagatgtgt ctggccccaa gccccgtggc caggggtggg	40560
gggtggggct gaggaggtgc cacgggcagg gtagggatga ggtgacatca gtaaaaacaa	40620
gccatgtgat gcctctttta aatcatccca gagtcagccc ttccagggct gcccataaaa	40680
ggaagtett tttgetetgt gegatttaag acettgtttt ttttttgttt tgttttttt	40740
aaatactctt tccacaagaa aactctccag tagactctgg gattaataag ctgataaaaat	40800
adatactett tecacadydd daeleleday Laydeledgy gallandag 193	40860
gctccctcta aaaagcacac tttaaaacca ctggacagct ctgatgagct ggagccgcga	40920
tttacagaat atgtccctct gtgaaggtgc acacctatcc ctctagaagt gagtgctatc	

PCT - Sequence listing for submission.txt ctggggtgta cgcccaccgc tatgcccatt cctcacttgg cttctgagcc cccaagcaca 40980 ccccgtgtct tcagctggac aggctgccat ctatgtgagg cactggcaaa ctgaaatatg 41040 cccaggacct catgtataca gtacccctgc tgccgcctgt tagtactgta ccaggtagta 41100 gtgactctta gcagggatca gactttcaga agggcctacg ggactgagtg ggtcctcctc 41160 tagcatctca agcaactaag gttgttttag ggccaggacc tagacgggga tgctatatag 41220 cccagttgct ggcacacagt cgatgccagg gaccgtccag cagacactgt cacctgcctg 41280 tgatgactct attcaattta tctcgacaaa accagactgg gattcccagc ctcctggggg 41340 tggagaggaa aagtacagaa gtagtcagat tggactgagt atgtctcagc tgcatctgag 41400 ctggtgacgc tcggctagta aaacgttcaa gttccttcct gaatcccgca tcccgaagac 41460 ttggcatgtg agctctggag atgttaatgg atcaaatgga tcaattctgt ggctgagctt 41520 acatcgtcgt cccattctgc agcacgaggg ctggaacctg tttcaggatc tccaggttcc 41580 gtgaactctg ggactggccc ctgacctcag cagggttcac tgacaaatct gtgtccaaag 41640 ccctgaaacc caggggtaaa gatgggaatg ataggctccc ctgacccagc ctcacagaat 41700 ttgctagatc aattcaaact gagctattgc actgacagtc agacctggat accctggtgt 41760 ttggtggcag cctttcctct aaagctagaa cactttgtaa tacacaaggc tggatactta 41820 gctactcctg aagcagactg gttcatgtgt agggacgacg agaccaaagc atggccagag 41880 aaagggctgt tcctgcctca gaaccacacc atggaagtcc ttcctctacg tgtgagaccc 41940 aacaggcttc agactactcc caagagtgtt tgcttactgt gccaaaaaaa aaaaaaaaa 42000 atcctttcac agaacacatc ttcctctcat cagcgtctca gccaaatcag ggcaccacac 42060 tccctactgg agcagcccgg ctcccttccc ttcactctgt tcttttctta gaaaggagac 42120 cgatctgcca agggggttct gaatggcaaa gcaaaaaggc ctcctgaatc aatcatttcg 42180 catccaagag cggcctccgt gtgtaagctt cctcctctt atgctgggaa caggaagtcc 42240 actgcctttc ccatagcagg tggctccttc ccaagcatat taaattcata ccaaaaaaaa 42300 aaaaaaaaat ccaggcagct ggggatggat caacttcagg agttccatga gtttctcaga 42360 caaatgtttg ctccagcata aaagaaaaga aaaaaaccaa caatacctct cctgtgacca 42420 42480 ggcccaaacc acaggaacaa aactcacacc tgctcttttg aacggtttct cagctcgtga gacagtgctg atcctggtat cctaaccaag gctggtgggg cacaccctta cacagactca 42540 gaggcagcca tgctcctact ccatcctttc acctttgccc acatactgac tattctcgca 42600 atggacgagt aggactgccc tgcaccactg aggtcaaagt aaagctataa cagcactcag 42660 aacccagagc ttctctaggc aggccccctg catcctgtac gccttcggag gtcagtttag 42720 aaaggccaca gtggcagtgt tctccgtgaa gatgctgcag ggcacagcag gccacggacc 42780 agtcagtggc tcaatatggc ctgctgtcta ttcagttttg taaggccctc ccaagcaaga 42840 gggttttttt tttttacact tgccaacagc tggggcaaaa acaaacaaat taacaagtcc 42900 cccacgcccc acccccaaat aggagtattt tataagaaga aaacgagagg aattcaaatt 42960 Page 33

PCT - Sequence listing for submission.txt

·		
ccaatataaa gttttagttg ggcaccagca gtaacactgg ctgcaatcca ag	cactaggg	43020
gagtttgagg caggaagatt atcctaaata cctgggctac actgactcca tc	cttgttga	43080
ttcctgaatc atagtggcag agcagagggg ctggaaggaa gagtgagcgt gc	ggtcccca	43140
gcaccaccaa tcctctccag tgtattagag aaatcctctc agtctatgga gt		43200
gagaagccac ggcctctccc actacacaga accatcactg ttcctaccgc co		43260
atccgatctc cttacaatca ccccacgtac cggagtatct tcatctgcgg ga	agccctgc	43320
ctctgaccag cagctatctt ctggagaccc tgagctagct agtgtcacct ca	atcgagctc	43380
ctcctaggtt tcattagaaa gcctgtgaga tgacattttc aactgttgga go	cctcacggg	43440
ggacgatgct agcccacacc ttgacatctc aagattcaga gtacagtcac ta	agcacctct	43500
ctgtgctctg cccaccacct gcactgcacg cccaacctct ccatctgtac a	ttgcctcac	43560
catccaaggc gccacgagag tgagcgctgc gctggggaag agaaggccag g		43620
agtcttttgt gtagaagtga agaaatcttg acaacccccc tgggattctt t		43680
agctgaacct gttttgaagt gtttctggga aactgtatgg gtcctgacat a		43740
acctgctttg atgcttaacc ccgagatgca gagcaacagc cgagccccac c		43800
gcacatcaaa tgcaagtcca ctgctctcaa cctgtactcg atgagccaat c		43860
tcatgtcttc cttgaaacct cactccaaga agtgccattc tcggggctgg a		43920
cagcgggtaa gagcactgac tgctcttctg aaggtcctga gttcaaatcc c		43980
atggtggctc acaaccatcc ttaatgagat ctgacgccct cttctggtgc t		44040
cagctacagt gtacttagat ttaataatga ataaatcttt aggccagagt g		44100
gaccggagtg ggcaaccttt gttcccagca accacattaa ggctcacaac (		44160
gctacagtgt actcatatac ataaaataaa taaatctttt aaaaaaaa		44220
tcattctcca gacccactga gccaccaaca tcagatgaca aagaaagacc		44280
agagtacaaa taaaaggccc acatgtggaa agattcttcc ccaattttgg		
taacttctga ggggtggagc ctaggaggct gccaggtcat tagaaagtta		
ttaggactac agcaggaaga ttgtgaaccc ctttaatgca ggggttctca	accttcctaa	44460
tgctgtgtcc ccttgacaca gttcctcatg tcgttgtgac ccccaactat		
tataattgta atctgctact gttatgaggc aaaatggaaa catctgtgct	ttctaacggt	44580
ctcaggtaac tcctgtgaag gggcaagggg tcacgactca caggtagaga	acggcttctc	44640
taatggctcc ctttcacttt caagccacaa agtgagactg tgcgctctga	cacacctttt	44700
ctaccgtaac agttacctcg ccacaaatcc aatggacccc actgccgctc	ccacactgg	44760
agccaatgtg aaatgcttct ccttgtaagc tgtttatctc agggagtttc		
ctggctgagc acggaggtgg acgtgacacc acgtgtgtac tgccatcgag	tgacaattc	t 44880
cacaaccaat cgatgcagga tgttattttt aacagaagtg gagcgaggca		
Cacaaccaac -ga-g-agga-s		

PCT - Sequence listing for submission.txt caacccccc tagggtgtgc ctacaagcat gtccaaagag ggatgagctc aaccgtgctg 45000 taggtccatg cagctcgaag ggattaagaa gacagcagat ggtctgtgac cttgtgctgg 45060 ggctctctga gctttagtct acccgtgcaa gagagtgact cctgaccaca gagctctgtg 45120 tgagcatgct gtatagacct tccaggggct tggggagagc tttcaaatct ggctcagcag 45180 tagtaactaa cttgcatttt tgtcttaaaa attaaatttt gcatgaaaaa gatgagccag 45240 45300 45360 cacgccatgg tgcaaagtgc caattagcac tggggggacc aagggggcac aggatgagat taaggagcag cacaaagtca cagatccaac aagctcagca gcagcaggat agagcctttc 45420 taatcctctc ctgtacccac acacaacgga gtgggtggct ctggaaatac atacagcata 45480 tcagggcagt tgtccggctt gtccagaagg ccaccctcca tgacgaaacg aagaacttgc 45540 tcgttggaca agccctggta gggctgctca gccagcgtgg cgatctccca gaggacgacc 45600 ccgaaggacc tacaggtgga acagaacagg aacagctcag aaagggatgg gaagggccat 45660 gtcccctcct tgccagcatt tcttagactc tgggtcctga aaaaaagtgt cctcaatgtg 45720 acgactgcac tttgtggaca tcaaaccagc cagcttgcta cgtgtgggac atctgttccc 45780 ctttgtcact gctaaggctt cctatagggc tactgcaacc cagggctgag gtaattaatg 45840 ttaggggctt ctaacatctc tcacagtttt aagagcccga tctacagcgg acacattcag 45900 tgtctggtcc cagccattac ttggacataa gccaaattag ctctagttca gcaaggaatg 45960 cagaggacca ggtcccagcc tggccactga cctgagacag ctaagcatct caactatctc 46020 ctgcagggat ttctttcatg ccagcttaga aatactgatg ctaatggttc tccacgcctc 46080 cgcaagaaga atctgatcag ggttcttaaa acaatgggta tcttgggctc tccaaagcaa 46140 ttctgacctg ctggttgtag ggtagggagc tgggcctgga atgtctcaaa gttctgtagg 46200 atcttgactt gggtcaagga agatgaaaac tcgtcccctg cagaactcag gagccatggc 46260 tgcagaggtg gctgtgtcag gaagggaact ggggtaggat acactggcca gggggtgtgt 46320 cgcaataaca aagagtccct tggtctagag gctggctgag gtatgaactc atcaggcgaa 46380 gcagcgagga ttctactgcg tgaggtatgg cctgtcagcc cagaagatgg aactaaagga 46440 gatccatgca tgcagacact tcagacagac aatggtcaca ctgtcgctca gtgtgaacac 46500 accttctcag ggagaaccct tgctttcaca aaattcttcc tggcctgtct gctcttatgg 46560 tcaggctgta tggctagaat gaagaaggct gcccatggca agccaacaca aggcttcgga 46620 tggaacccta gcagggctga gccccacaga agagcctgag gcggccattt tccacttagc 46680 actctgagga tcctggccta agctggagca acagcctctg actgcatctt aacttttggt 46740 tcgcagcttc agtttccttc taggaacaaa agggttttgt cccaactgat gctaagcaat 46800 gtcagacagg aacagaacct cagcaatcag acccaagttc cttgggaacc ggcagtcact 46860 aagacagaca gtgcagttac ggttttcaaa gacctggccc tagagaagca ggtttcctgt 46920 gtgtttcagg cctgggttct gccttgcaga gcctttgtgg acactcggag gcattcttta 46980 Page 35

PCT - Sequence listing for submission.txt

gaggctgcag 1	tgctcaccct	catgtctgaa	tccggcctga	gacaagcagt	gatgtatgtg	47040
gttttctctt	tttatcaacc	ggtcttgacc	aggttccctt	ccaagccgac	tccccttgtc	47100
tttcatgctt '	tccctggtgc	accacaggct	ttcaggcatt	cagtcacaat	cctggccccc	47160
agctcttgac '	tgccatgtct	agattgctgg	ttacttgact	ctacagactc	agcatgtcag	47220
ctccagtgta	actcttgctg	gcaccctgtt	ctcctcctgg	actccctgca	ggccaacttc	47280
ccattccatc	ccaccccatc	tcagcagcca	gtctgctcat	aggacggaca	ggaagataga	47340
gagtataaat	cagaaagaac	gaagacgtgt	aagggctggc	cttcctgccc	ttgtgaggga	47400
ggggacagtc	cctgggacat	ctccccagaa	gctcaaataa	cagctgtgat	aaatgcagat	47460
ggtcagggtg	tggcttgacc	tgaggacacc	tccctcacc	atgttcctaa	ggtctcctac	47520
caagtcaaac	aaaatccttc	caacttttct	ttggattttt	acctacttct	gactgtgaat	47580
tcattctaaa	atgactgcaa	ttcctctagc	aagcagaggt	tcaggcagag	ctgagcatcc	47640
gtttatacgt	tctagtgtcc	ttgatgtccc	cagctgtgtg	ctcaaacacc	ccagcacttg	47700
gccttttctc	ttcacgcatt	ttcttattgg	tttgtaatgg	ctacgtaatc	caagtggagg	47760
aaacctgcag	gaagcaccct	gtgcgcctct	ggctgtggca	tgcagttgtt	acccagagtc	47820
gggggagaat	gagtctgtgc	tcactctttc	cctatcctgt	aaggtgatct	ccaagcttcc	47880
agaaaaatga	agcttagaac	aaacagatgg	aagtgtggcc	ctaggtgtgc	cctctcctgc	47940
gacctcatct	acacatggaa	cagagttctt	tgattcgaca	gagaagatgt	aacctcggag	48000
					gcgctgggtc	48060
					ggctcttgac	48120
					gtttctctgt	48180
					acagcaacgg	48240
					cgacgtgcca	48300
					ccacacggtg	
					tggtcagtgt	
					a taatggacat	
					g tgtgaacaga	
					a taaagcactg	
					a gtaccaacto	
					t ccccagtctt	
					c ctactccttg	
					c taaaagacaa	
					g tgaacaaaa	
					g aaactctca	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	9 9					

PCT - Sequence listing for submission.txt accagacatc agaatgagta gtgaagacac catccttgag ggactcggga gacatccagc 49020 gcacaggcag caaccccttc ccgcctttcc ggtagtagtc cgtctcgtag atgtctcgtg 49080 tcataccgaa atctggaggg aagatgcaca gttactcggc tggaccaggt cttggggcag 49140 agccctgtcc ttcccccat attcaaggtg agacatgttc ttgctccact ctgagagggc 49200 49260 tctagcatca cagccacttc acaggagaat acaagacatc tctggtcttc atcaggctcc tttaagaaat taactccctt ataacattta aagcgagagg cagtttgcaa aatcattgag 49320 taccatgatt tttcaagaaa atatacgccg cacagggtga ggatatagtt ttaaagtttg 49380 gtccaataca cgggaggatg aagaccccat ttacttggta gtgtgtctct actgctgagg 49440 aaaaggcctt ttgccactcc acagaggaca atgtacgaag taagaactca ggaagataaa 49500 aggacagcaa acagctgaga tgttcttcac caggctcctg gagctactac ccaacaccct 49560 ttcccaacac aatactctca ctcagttttg aaaatgtttt ccattttctg agtttcatca 49620 tggtgaatgg caggcttgct tttttataat ctcacattac tgtgtcttta tccatttttg 49680 attttccact caaccgcacc acctttccct cacataaact cttgcattct ccttccctgg 49740 agggaagagc tgctcaacct ttaaaatgtc ccctcgcacc tctaagtggt gccacaaaga 49800 ggtgaggtac aaaaaaggca gagcaaaccc atgtagggtt tgctctgcat ggatgttaac 49860 ccaacacaat tgacttgcac cgctgtctga gctactggct gcctctcttg aactgattta 49920 gggtgtgtaa tccctgagat gggggcactg ggggacactg aggaatgcag aactcgcccg 49980 aggaggaaaa aggaagtgct taaatctcat ctctgaatta atccagagac atgcaaatga 50040 gaggatctgc tttgacttgc ataaaagggg aattctagaa aacaatctct ctccctaaat 50100 gcaaaagaaa aatagaacaa ccccctcttc ccaaacgggc acacacaatt taattctaaa 50160 aagaaaaatc ataattataa tagaaaatat cctcataaat gcgccacatg gttaagcaga 50220 aaatataatc cttactgatt tggatttaaa atggcaaaaa gcacacgcac acacaaaagc 50280 atttttccaa ctgtaatgca aaatgggacc aaagcagcct ctcggagttc ctggctgtgc 50340 tgagaagggt gcacagcagg gtaagatgag gacaggggca caggcttgct gtcccagccc 50400 gcctcctcct ccagctctgt cccaatccac tctcactcca caggtgggga aagatggcac 50460 agggagggaa ggcacctgcc tcaggccact caggagcaca gtttcctctg aggactaaaa 50520 tctagatccc cacacataag ggagggatgg gaggcaggaa ggaccacaaa ggctggttaa 50580 gaggatgcgc ctcttatcta gaaactctgg ggcggggtat cctcttaagg gctgcccacc 50640 aagctaggct cccagggctc caaatatgag tgtacaaacc cagagacagg ctgggggtat 50700 cttcagtaac tccaatgact gacatctgtt ctgtaacaca gctgcatgcc aacaccccta 50760 actcctgcaa tcagcaaaga agagagcccg actttggata cctctctaga gatgacaccc 50820 atcgcttact aagaggccgg aatggctcat gcaaaaacca cttctagggt tgaggcaagc 50880 agaacatctc caggacacaa gctcaagagg cggccaaagg ttagtggctg atcgcttctg 50940 ctacatcgtc tgtccctctg cttgttctca ggatggacac ttgttatgtt tctgacctgc 51000 Page 37

tggcctatcg cagtaggaag gtaaagtata tgcaggatgg ttttctgagc aaccttgtta 51060	
ctactttttt tttttttt ttttgaagta aaagacaaaa aaacaaagcc aatatacaag 51120	
ctgtaaggct ggggagaatt tctagccaat gaccagagat gtaatgcaat cagtgtttta 51180	
ggatcacaat gtgttggcag caacaaggta ggctgagcag ctaaggtcat ggcaggaagc 51240	
tatgcacgac agaacggcca agtgcttgga gctaccactg aaggatgcac ctcagtggct 51300	
taaccagcag catacatcag gccctcggtt caattcctgg cagcaggaga ggaggagaga 51360	
acttagagcc gaccagtcct atgagtgaaa agcagtcagc agtgatctcc cgcggactga 51420	
catgaccacc atataccctt cctgttacac tatgcagggt ttcaccatag gggcacctgg 51480	
cctcttagga accccatggg cctattcagg gacaatgctc tttgtaagct gagaaacttg 51540	
aggggtggac tggatggtga cattctcctc aagccaaaac cacttcagga agcaagctgc 51600	
cccgattatt tctgtaacgt ttgacctggg gagcagggcg ccaatctgga ctaccatgtt 51660	
aaggtgctct ccgggttaca gccaggaata gacagtcaca ccgactacat acatctttgc 51720	
actcaagggc gaggcactgc tcctctcgga cataatgaaa atctctccag tggcagacta 51780	
atgactgcaa agtcccctca gcacctgtga gttcagttta gcctgtgctc caatctggaa 51840	
agcaaaggac acacctccaa ttttgactgt gaaatcttcg gctaccatgc agttcctagc 51900	
agcaaggtct ctgtggacga acttgttggc attgaggtag gccatgccat	
tccagccatc tggatcatct tgcttaagct cggaggaatg aggactagat tattctgctg 52020	
cagattcaaa acaagacaaa gccatgagca acggagacct ttccccccta acctcctgta 52080	
ggtctacact aggagtcgta aatgcatatt tacttagtct gagtaccaca ggtcacctgc 52140	
agggagtcag gacttgctaa gaaggactag cacttctagg gaccagcaat ctctttccc 52200	
accectcc atgeatgeat gtgcatggat gtgggggcct gaagettatg ttgggageta 52260	
ccttctaccc actggttgag gcagggtgtc cctatcaaac ccaacctggt caacatagat 52320	
tgctctgggg atcccaactc atccttccaa ggctggaatc acaggtgtgc tgccacacca 52380	
gcccagcctt tacctggctt ctgacgacct gaactctggt ccttatgcct gtgaccaccc 52440	
cctccccct agtctttct atttggagca ggacaaaaat gatttgaagt gaatcagcaa 52500	
gtttaggcat taagcattct cagctccagc tagtttccat gttcctttgg cttccgccat 52560	I
caccaagtgt gagtaagagg aaggacagag aacccgtaca aaggccacgt gaaacagaca 52620	,
cacttectaa gtggattace acgagetttg ettecegtge aagetgecag gaettatteg 52680	)
tcttcattcc cttcttctaa ggtacaaaga taggaagact aatgctttcc tcttggatta 52740	)
ctgttttcta cgggcactga ggataaccac agttcaggtg gagttcacct tggaggggac 52800	)
caaggacact gagcagcaat gaggaccaat atcatgtctg aagaggaggg caagatgctg 52860	)
caaggacact gagcagcaat gaggaccaat attaaggaaa tcataaacaa acaaacaaac 52920	)
aaacaaaata agataagatt tatgtctaag aggctgatga gaatggctta gtgggaaagg 5298	0
aaacaaaata agataagatt tatytttaay ayyttya gaatyy gaatyy gaatyy	

PCT - Sequence listing for submission.txt tacctgctgt caagacaggg ggcctatgtt catgtcccaa gacaggtatg gtaaaagatg 53040 aaaaccaact ccctcaaggt ctaagtaggt atgcacatgc atatgcatga acacacacac 53100 acacacaca acacacaca actacacaca tacaaacata aaaaattccc aaagctccgt 53160 caccccactc ccatgtgcaa aaccaaccat gacccttatg cctcagtttc cctaactgaa 53220 aaccttctca tacaacacta tgaagccatc tcatttccta atgtatctca agtcacagga 53280 gagcatgacc aggcttggag atcacactat ttgggctagt atataggccc tttgtgctct 53340 gaccacgatg aacactcaag agcattctgg ctcttggcca gggttgctaa gttctcagca 53400 gatgccagac tctaggaggc cagcaacagc cctctagcac gtccaggagt actctccaga 53460 cgacatggca tgtgaggacc aagttgagct catttatcta tttaaccatt ttcactctga 53520 tccagggtct cttcctataa tctaggggat gtcctcagag gatgtgccat cacaggtgct 53580 tccttgtcac gctgaccttt agcaccgtta gggtcttaca tacacatggc aaagcaggac 53640 ctctgcagtt ccgtgacatg tacttatagg ctcatgacac atactgcagt gtatgtgt 53700 aatgttgtgt aactgttcaa caaagagctg tcacttaaca tgtgaaaaac aaccaacaat 53760 ggggacttaa ttatgtgcag gaaagggctg ggctgacatt ttgtcagttc atggtaatat 53820 gttgtcattc ttttcttcat ctcgagaaag aagaaatctt tagttttgtt agagcctctt 53880 aaggtgagca cacatccata cacttatcta agtaaataag caaacagcaa tggggggagg 53940 tagaatacgc tgaagccggg gtgtatacac tgaagctggg tatatatact ggagctaggg 54000 tatatacact gaactgtgga gtatacattg atgctaagat atatgtaagt tatttttaa 54060 aaaattctga catgagttag acaaaattta gatctgatga atttaaagat taagttttac 54120 ttccgaaaga gactttcgta atccaacctg tctctttaca ttgaattaaa attttgtttt 54180 atgtttgtgg gtgttttgcc tgcatgtgtg tttgtgcact acctgcccac ggaggcccat 54240 ggaggccagc agaacagtga ataccgacag ttatgagccg ccacgtgggt gctgggaatc 54300 cacccagggt tctttggaag agcagccagt gctcttaact gctgagccat ctctatagcc 54360 ctttctctt ctacatgagg aagcggaggc ccagaggcat ctgttaactg aggactggag 54420 gtaaccaatg gcaaaaacag ccccgagagc acaagttacg ggtttactct gggcatgtgt 54480 caaaggcatt aagcacattc tgatgttagg aggtgcctta aaggaccact ctccagtctc 54540 cttctgtaga ctgggtatta ctggggtagg atgctgctgc tgggagaaac aggcatagct 54600 ttgtggctct gctatcaatg catacaccgc cttgtggctc tctcctgaaa cttcagaaac 54660 acacatgagg acatttgtga acaggtactc agaactaaaa tgaaggaacc atccatcact 54720 tggtagatga ttacgttgtg gaggaaaaga aaacgaaagc ttctacagag aaggggagca 54780 aacccagaaa gggcccgaga agaggaagtt ccccttacag cgaatgcaga gacaagctgc 54840 ttagttagcc acaggtatca aagccagggc cgaagtgaga gcctcagagc ctgaggcagc 54900 cccatgaaag gcatttggtc cagcaatatt tctcaacacc cccatcagtt aactcttagt 54960 gaggacttag aagccaaact taagccaggt gcttgtggtg cataccttta atgccagcac 55020 Page 39

PCT - Sequence listing for submission.txt

ttgggagaca gaggcaagcg aatctctgag agttcgaggc cagcctggtc tacgaagcga 55080 gttccaggac agccggggct gcacagaaaa aaaaacaaaa caaaatgctg tctcaaaaaa 55140 caacaaacaa acaaacacaa aaataacaac aacaaaaaag aagtcagact cacatatgct 55200 aaaaagctgg ctgtgggcta acacaacaga aggggacact ccacagtgac taatcaaaaa 55260 attacacagg acctactcag gttcacagtt tgaaaatctc actagcctta agcagaatca 55320 tgcagctgga atggttatca tttaaaagcg caggcacaat actggcttat tgcctagcct 55380 ggggagtagg ttcagggttt gagaagtgtc tgaagcagtg tcggggcaag gggagagcag 55440 tgtgtgccat caaggtaagg atagcatgct cacatgtaca cgtgtgtgtg tgtgtgtgtg 55500 tgtgtgtgtg tgtgtgagtg tgtttgtgag tgtgtatgcg agtgtgagag tgtgtgtgag 55560 tgtgtgtgtg tgtgtgtgt tgtaatgggc tcctgaggaa acagtggtct cgtgcacaga 55620 ccgggctgcg agtcactctg gccaaaacct ctgacaacct gaagagtgac ctttattgag 55680 tacttactga aaaggttacc agccacggtc atgaccctga ggtaaagaag aggctcaccc 55740 cgaggacctc gagagtaaac gtatgctagg cagtcaagtg tactggaaag tcagtggggg 55800 aggccagccc ggcctgagtg ggaagctgtg ggaagggttg gccatgacac gtggtagagc 55860 agctggggtt ggtgtaagat gtaggcaggg gtagcgggga tgcagaaaca agagcacaga 55920 gatgctggag gttgaatggg tgggatgcag agacagacct tccaaagatc ccagtctgcc 55980 tacacttgga caatcctata tagagggaac tgacaagaaa gcatatctca aggcactcaa 56040 ggctgagaag caaatggact taaagacacg tttcctacaa gccagctcct gaaaaaagtg 56100 gaccaagcaa gataacacag cgaggaacaa aactgacctc cacttctggc ctcagagacc 56160 ggagataact tttgagatca ccgcgtgtca ttagttccat gatgaccagg gtgggctggc 56220 cttgggatac cacacccagc aaccggacct ggaggaatca agaaaaggac tcagaggggg 56280 aggggggcat cccacatgat gacctacgcc tctcggaact gggtggtgct ggggcctgta 56340 gccaggagca gagttctggt gggagggcga gggcgaggct cccacctcaa gggtctgtgg 56400 56460 ctggccaagg acatacaggg tggtcctttc tgtccatact ttctgtccat gtctcatctt 56520 ggcttcttac cacatggtga caattgaact ccttcatcac cgaggcctcg ttgagaaact 56580 cgattctttc acgcatactt gcagcctcgt ttaccgtctt gatggccact ctggtttcgg 56640 gttcatcctt gaccacaccc ttggccactc cttcatagac catcccaaag gacccttgtc 56700 cgagctcccg gttcatggtg atcttctctc gagctacctc ccattcatca ggcacgtaca 56760 ctagtaacag acaggatgga aacggccctt agacagagat tacaagatgc tgttccctaa 56820 gacccaccaa ggagaacatc aaggtacaaa cagtccagca cgggtactca atctctgagg 56880 actccatgac actttgaggg tggtactcgt agctaagaac cagaaggaaa ccaagaaacc 56940 taagatagga aaaccaaatc aaaccaaaca acagtggttc ctttttcata tccttggcaa 57000

PCT - Sequence listing for submission.txt aaccccaacc caacaaaata aaaaaagcaa attagcccta agagacaaag aaagtgggac 57060 ttctgttttg cctgtcttca tcaagggatg gaaatgtagg tcagaagggg agaacagtgg 57120 gaggggaaag gaccaaaggg ggtcaaatct cctcctcct ggatgaagcc agaggtgaga 57180 aacatcctct gcatggcctg ggtgccagtt tacaggccac ccagccccac tgtaggcctt 57240 cagcgcttga agtcgtgctg gaagtaagac atatactgca ttttaaagac ttgcttaaaa 57300 caagtaaaaa aagataactt ttaaaagatt ttaaaattta cgtatacatg tgaaaatctc 57360 57420 tgagcacaca cacatgcaca gatgtgaggc accacccgtg tttgggtgcc tgggaaaccc 57480 agaagacagt gttggcttct cggacctata gttacagatg gcgggaggtc tcttcacaga 57540 ggtgctggga actgaattag agttctccag aaggtcagca aggctctcaa ctgctgggcc 57600 cattttttt tccagctttg tattccaaag acttggttaa agcaagttta aaaagatagc 57660 ttttatatta actgttggat gttgtgggct aaatgaaaat tctaacagat ttatctcatc 57720 agettttaca cttaaaaaaa catggctact agctgggtgt ggcaacagga aactgcagtc 57780 ccaccccagc ccactgggca tggaggttgg agatggggtc tgctgaacta aaggcatctt 57840 cagattgtgt ttcaaaacac caagacaatg tgtcagccgc ctgggatgtc tatcagttca 57900 cgcacttcat tccacttctt ccatagccat gtccgacaac aagctcaagg tggctgagag 57960 ggagaaactc agtcaacact aaaggcagag actcaagaga agagtcctca gccatcaaaa 58020 gaaaccgcag aaaaggagat gagaggccag ccccacccc cacccccgca gagcgctgag 58080 gtaggtcttg tgcactacaa gcactgtctc cctatattcc tccatacagc tgtttaactc 58140 tggaagctgc agaggttgga tccagtttaa cacaccctgc tgcccctttc accgagatct 58200 agtgacgata cagactgcct gccttttcca cctgagagga aggagaactc acacgttgat 58260 gaagaaaaaa gcagggttgg gagatgaaac ccagggttca aatcccagat gattcaaggt 58320 gctctacagg ctgtaaaatg cagtttaatc ccagggctgt gctgtgttgt ttttcaagtg 58380 atttgactta gtggaatgca tactgtttta aaaccatcaa ttttgtgaat ggctgttttc 58440 cctgcatgca tctgcactgt acgcacatag cacctgggtg ccactggcac gtgggttctg 58500 ggaatcaaat cagggtcctt ctagaaaagc agccagtgtg tttaactgct gagccatctc 58560 tctagccccg gaatgcatga aagtattaaa acttaacaca agaagccaaa ctcttgccta 58620 acacaggtga agcctaggag cccccttcca ggggatctct agtgagggaa gtgagcgctg 58680 ggatggaggg ggactcagta gtgaccccac ggctttggcc tgcactctgc aatgccagga 58740 acctccctga cacggacctg aacagaattc cttctccagc ttccattttt ggttatgctt 58800 gatctggttt gagaaaaata aataaacgaa tagttctcag aaggaagggg gaagagaagg 58860 aaagaaaata agagaggcaa gtaagaaaga ccaaacacag gctccatccc ataacgccag 58920 tgggtacagc gagaactgaa atcatatcaa attaatacgt aagatctgga aagagaatac 58980 ctgctccatg agaaccataa cctaacagag ttactgacag ccctgtctaa cagaggatgg 59040 Page 41

ccagcaggca tggcaagaag gaagccctag cttagagaca ggcctgggag gggaatcacg 59100
gctgtgtttg tttttatgct tttagatgcc gagctgcagt tggaggtggg agaccccacc 59160
agcaggtcat cacggttatc agtcaccctc agagcacaag cccttacttc taagtgatgt 59220
cttaagggaa gggtgtttat tataaattcg gggctgggga ccccattgac ttgtattttg 59280
aagaatggaa catacatctt gtggtggttt gaataggagt ggcccccaca gactcacaca 59340
tttgaatgct tggtcattag ggagcagtga tacctgacag agattaggag gtgtggcctt 59400
gttggaggaa gtgtggcacc gagggtgggc tttgaggttt caaataccag gcctatgtct 59460
tgctctattt ttgctgcctg atccagatgt agaactctta acccctctcc agcaccatag 59520
caccatgtct gcctacatac catcatgttt gctaccatta caacatgggc ctaaacccct 59580
gaacctgtaa gctcctttaa gccagccact ttccatgaga agagctgctg tggtcaacgg 59640
tgtctcttca cagcagcaga acactaagac acatacttat ctgtctactc acttactctt 59700
acttactggc tgatttgggg acaggactgc tctatcttgt tcatacttgc cttgaacttg 59760
ctatgtaatc caagctagcc ctgaattgac aacttttctg cctcagtgtc cccagtacgt 59820
ggattccagg tttgtgtggc cacatttggc tcctgtgcat gtttttgtat ttcatggaat 59880
atgtatgtct ggtaatttct caactagaat tctgtcttcc atgggcctca gacaacttgt 59940
gaccetgeag aggetgaget tgctgaggag ageagagggg gaaaggtett tataacacet 60000
ctctgtaagg atggggacca ctgtctccat ttattacctc taaggatcca ggctggcttt 60060
taatgagaat caactacacg gcttgcttgc tgcagagcat ggagttaaaa gcccatcaca 60120
tccattccct gggaggtccc tgaagttagt ggtctcaacc ctttttctaa actcaatcca 60180
gctgccgact ttagccagag tacctcagct ttgccagcca gagctgttca taaacttcgt 60240
acaatgttat cagcactttc ctgtagggca ttctcagtgc actcttgaca acagcaacat 60300
gcagattaac tctgggagaa agacgttttt aaagcacctt tcagatgcaa tgtcactttg 60360
tagctctttg aggcaaaagg cttgtgctgc tgctgtgctt gtcaaaaggc caaacaaacc 60420
aagtgcagat gaggtgacag tgttctcacc tgttgacctg ggtagtgaca agtttgttct 60480
aagtgcagat gaggtgacag tytteteace tyttgacety gydaysta 5
tgctttgttt tgaagggggg agggagacta tttctctggc acctcttttc tcttttataa 60540
ttattgacct agacacaatg gctgcacggt tctggctagt taggggacgg aggcaaggtg 60600
ttcagatcat ctgaggccag gagtttgagg ctggcctgta tadacaatgg assistant
tettgatttt tgecegtttg etttettgtt tgttttggtg gtgtgaggae agaaceegtt 60720
ctggaacacc gtaggcaaat gctctatcac tadactacat atteadacte destations
tttgtttgtt tttaggagaa agatagtctc cgtaagtaac tatgtaacta tgctatoms
tgtggtgctt accettetag tgtatttet atgetttata ggeacadaeg tatgettan
tgcctactta aaaaataact ctgcaagacc ttttgcaaac agaaataaca teattari
gcacctgatt caaattcaga agaggctgtt cttgactggc tttactatac acataatcca 61020

PCT - Sequence listing for submission.txt gttataaatg attaaagaaa ccatagtaaa accatacgca cttacatggt gcttttaaat 61080 tacaaagggt tttctctttt ttttttttt cccatgtgag caggataatc aatcggactg 61140 tgtcttatct gggccgcatc tacttacact tctggagcaa agaaacattc ctcctgaaca 61200 aactcctgcg ctgcacagac ccccatctaa ccagattccc tacatagccc agcaacctca 61260 cagctagctc ttccatacac cacatcatga ggattcagga ggaaggcttg ggatgtccct 61320 tgtgcagact tcccacggct cagctgtggg agcctgaaca agtccttctc agagattctt 61380 tttttgcctg catctagata gacatgagaa agctccaagg gctaatcgag gagaggaccc 61440 ctccccagct tacttagaag gtctgaagcc aagcataagc gctaggggaa aaaaagagac 61500 cagtagctaa aacacaggtt ccgagtcaga acttctgagc catttaatta aatgactttc 61560 attagttact gccaaaggga atgtaaatgg gtgcataggc tgtatgaccc taatcaggat 61620 agaacagcag agggattcca agatcataca acgctatata gccctcactg gccagggaac 61680 61740 gcctgcagcc ccaccctgag ttgataccca ctcaggatgc ctggctggct acagcagtcc tctgactaga cggtagtaat tagaatgctc ctttcactct gatgccacac ttcaagcggc 61800 taactgaact gcttagcaga ccggccaccg gcatctccag agcctggttt ctactggggc 61860 atctgagagt cccagaatgt ctgacagtca ctgagtgcta aagatgttat taaaagacaa 61920 gaaggaaatg gtaccaaagg cagatcctgg gacaaaggta tctcaaaatt acgcaacgct 61980 tttctccagt cagcacctga cagctcccat attcccacac cttggccagg acgcttacca 62040 tcagctgcgc tgaaatactc ggggttcaca gaagcataca gcactccatt gcccaacctg 62100 ctgttatttc tgtcaaaaaa aaaaagatga aaaccaggtc aacaaatccc atctctatac 62160 atttctgtaa ataccttttc ttttcctttt tttctttctc acgagttatc ttgagcaagg 62220 gacgcaaacc atgatcactg ctgacgggac ccttgcctgc actcctgatc caggccccgg 62280 tatctgagga caaatctttc cacttttgcc ctggcctcag attagagctt ctaaagaaac 62340 atttgtttct ttgcttcact ggaaataaca aggcccactc catgggaagc taaactggca 62400 tgcttggaga agctcttaca aggcagcaat ctgtgtgcta gaacagccag aaagcagacg 62460 acgggtacag agaaggaagc aacccctctc ctgttgctgt tagtcattag gaaatgtcct 62520 tttttcccct ctgaagaatg tctgactagg aactctggct gtccagtctg catggtattt 62580 tcccccacag acgagctatg ttcaagttca aatcatcaag ccaatgcgcc acaagtactg 62640 tcttccgctg gcccaggcac tcacctcttt ctatggaaga catacagcat gataaccagc 62700 cccccaacga tcagcaggat ggcaaccggc agagcaatga tcagatgcat gaagttctca 62760 tacgtcgctg cagagacaag gaagaacag gaagacgtca cgcacgaggt gaataactgg 62820 ctcacttcat ttctgtgtat ggttggaagg atgataaaac cgcctctgga atagccttta 62880 ctccctcatc tcacaagagg agtcttcgag gagtcttcta gtgctgggac aagaccagca 62940 gacaaactga attgtttgga gaaaggtaaa taaatacaga ctgaagcaca cactccttta 63000 aagcactgca tattctgaat acagcaagta attctgaagg caagcccttc ctgtgtgtag 63060 Page 43

1	ttttgtggaa gtttagctga aggaaaatga gcagacactc acacacttac tagttgctca 6	3120
		3180
		3240
		53300
		53360
		53420
		63480
		63540
		63600
		63660
		63720
		63780
		63840
	ggaaaggatt agagaaaacc atgactggtc aaaatgcagg gaaccactga ccatggggta	63900
	cccatgccca actgatgata gacccacacc acaaccccca caacaaatgc tcatggaaca	63960
	ctgcaaaata agtgcgtggt acgattctaa gatccagaag cccagggtgt ctgctgaggg	64020
	atgccacctt ttatgtaaga caccacccgc atgcgtgaat cccaacaacg cggttaccta	64080
	aacttgcgta atgacaatac cagttcacat gctttgaagt gtggggaatc tctgaagccc	64140
	caccctaga tgagaagtta ccagcagtta atggctgctg agagagaagg aggatcagtc	64200
	tttatcaggc ataagcttgc tgataggtta gccaatccca cgtggtcatc cctaaacaca	64260
	tacatgtacc agtaacacta aatgagcttg gcagagcatg tgtgtatatg tatgtaggtg	64320
	tatatgcata tatgtatata gacatatatg tatcaatgtg cgcacaagtt gcttagcaac	64380
	aataattaaa gtagtcatgg aactgagaga ggtgggcatg gaagaagctg ggagagggag	64440
	gagccagatg gtgtaaatac agtactcatg tcagaagttc taaaaggcta aaactaaaac	64500
	aatgaagaag aagcatcagt gaactcttcc aaggccagac tgaaaacgga ttcatgtact	64560
	gggaagatga gtgtgtctga ggacacactg ggggcctctg cacactgcca ggtctagagg	64620
	agttaaggga acgtaccagt ctcctgtggc atgctatgca tcgctccagt cagacctcag	64680
	gaagaaatcc ttttccataa gcaagatcag agaggcgtcc taactttgcc agggttgcac	64740
•	ggataactga caagttccaa agtcagagcc tggctttcct gcagccctgg ctcagaacag	64800
	ccgcaaccca gtaactggga ggctggattc ccgtcatgta ccagaaagaa tcagtaagac	64860
	tccagttaat atgggaaaac aaacaaacaa aaatgagtat gcggagaaga agaagcgaag	64920
	ggctgtgagc tttcatctga gagcccaacg gaatgcagat cagggaatga aacggaccga	64980
	agtgcctcca tgaaagcact ttagatttca ggcttataag gagtctatag caactattgg	65040

PCT - Sequence listing for submission.txt acacccaagt tgacatgtct acacaataag gatggcgttg tgggtaaaaa cacttgctat 65100 gttaccctgg caaccagaat tcaatccctg gaacctgaga atcaactctt caatgttgtc 65160 ctctgacctc tgcacatgtg cacaccaagt acacaccaac agtatagaga tgtctccttg 65220 gaaaggagct ggggactcag tggagacatg ttcctggacc gcgagccact caccaatggt 65280 tggtctacct ctaaactcta ttcttaatcc tgaaatacta caaaagccaa aattaagtct 65340 ttttcaaaat cgatgggatt cagcaccttc cagtttctaa aagtactccc acgtgcgcct 65400 ccctgccaga gagaagctcc gagctttcct tttcccctag gagaattcgt ggttttgtgt 65460 tcctgattct acgggtcagg ttgttctgtg ttctttttga gtttcacatt tcaacaggga 65520 cacagaggaa ctggaacaca tccagaagga caaaactgac agaaaattgt ctatgcaact 65580 ggctttcaag aaagggccca aagacctgag aatatttaat cgggagggaa gaagtctgaa 65640 gaggagttta atagaattca cgcaccaaga tttccttaaa aacagcaggt gatgccgagc 65700 tttcaatgtc cccctctgag gattagaccc aagaaaactg tgctaaactg cgtcttgtcg 65760 65820 gacaccggga aaatttccca gaagccaaga gcgctagcac gcagcttcaa tccccctgtg ggatgtgcca acttccactg gagaaacccc attagaggac ctcttaagag tccccagtgg 65880 cattgcagtc ttagctttac aaaggcagct acaaacatgc cctctcctaa gaaaagccag 65940 66000 actcacttag cttcagaagt caagactgct ccttcagaga acaccaccca atttccagaa ctccagtgtt ggcttagtag cacgacgtgc tacagataag cggaaatgta ccccaaggca 66060 gagatgctca gggcttcgtt gccggcctgt gacgttattg ggaagtagtg gcaggtaacc 66120 ttaggagctg ggttctagag gaagtcaggt cactggaagc aggtgtcctg tgagagaact 66180 gtgaaacccg ggccctttct gccttttgga ggtaaccagc ttggttccat catgtgcttc 66240 ctgcttctga cattttgtct cagaacagcc caaaagtaat agaatcaaca gacagagcac 66300 gacaaccccc gaaactgtgg gggccacccc tctaatcatc tctgggtttt gccacatcgg 66360 agagctacag taacatcaca atggagagtt agcacataag ctaactgatg acgctaggct 66420 acccagaaaa aaatgagaaa attcagagtc tacctgacag aactctcagt ctcatcatct 66480 66540 ctcaatctag acacagtagc agcagataca gggaatccta gcttcctgct tacggttcta tttacttctg tctttgtgca gtcacgatga ggattttcga atgtcttgcg tatctttgaa 66600 tatctggaac tggctaggtg ggctatcgaa gtgtgaactg acataaagtt atacatgtat 66660 acatatttac cacatacaac atatcttaaa gcatgtgtac attaacccaa tcagcatcag 66720 cattaagtcg cattgttacc atttctgtgg tggtaacact ttcttagcaa tattcaataa 66780 tgctttatta accatagcta gtgtgttata aagctcactc ttctatctac ctaaaattgt 66840 gtaccttttg agcaacaccc cctaagttat gttcccctgg taacctgcaa gactctgagt 66900 tcaccctttt agatttattt catatatacg tgagatcacg tggtgtttcc ctttctgcac 66960 cttctattaa cagtattcca ttacatatat ggaccacatt tttacccagg cacctgctgg 67020 aggatacttc attgtttggc tactgtgact agtgggccaa aaaaacaagg ggggtgtaga 67080 Page 45

PCT - Sequence listing for submission.txt 67140 tttcaacaca actaacttcc atttcttttg gactgggatt gctggatctg ttgagacctt 67200 gtctgaatca agaatccaga agagaccacg aagaacataa gacattagga aacaacagtt ccccacaccc tagattctag cctcaaagct gagctgagat tttgggggggt ggggagtgca 67260 aaaggaattc acatttgatc ctgtatttgt ttggatatta catgaacacg aaataatcta 67320 aaaaaatttg gcttctcata agacacgtaa aaattcacta tgtattattt caccaaaag 67380 actcaatttt ttttttttt cggtcaaaca agcatgcagc ccttgcattt aacatttcac 67440 aacatttact tttaaatctg aatcctaaca gctcactcag tggtttctgt gaactgtgaa 67500 acattatcca ctagggtggg tctgtgcaaa ataacgcaca gagtatcttt caatgcatcc 67560 tggtggatgg tgaagagcac agaggagggg aagactctga ctgggatgtt gtcctgcaga 67620 ttcctgtccc ggagcagtga caccagacga tccctgggga gacgctgagc gctgggtcac 67680 cctcaccgac caggcaggag acctgatact caactcaatg ctttgcaaaa tgcctccaca 67740 cctgagccac gatgagaaca agatatcttc taggttgtac gatactcttc tgttactcac 67800 aagagaaggc tccaaggctc agcaccttcc cagctctggg atgtgcgtgc gagtgcacgt 67860 gcgtgcgagt gttggggtgg ggggaaggtg atggtggcac agatgtgtgt ccactgtgag 67920 taaataccaa gtgtcttcct ttctggcgtg acacctccgt tttctagata cggcttctcg 67980 ctgaaagcaa aggtcaccaa tggaccattc tggctagcta gggatctgca aaactttgac 68040 tgtcgatctc ctgagcaccg aggaagcaca ctaccgcccc tggtttccgt caaggacttg 68100 aacttagatc tttaagcagg cactttccct agtaagccac ctcctcaacc cagccagctc 68160 tgttctaaca gaaaaccaga gagccccaga agctcagggc ttctgagttc tggcccagcc 68220 agctttgaaa tttaccgtgc gtctccctca ataagactta cttttggcgg ggacatagaa 68280 gaacacagga tctgtccatg acccattccc agagagggag gtagcctgaa tccgggctgt 68340 atagttccct gggtttagac ggttgagttt ggcccctccg tacttcctgt actcctgtct 68400 ggacacacat tcccgctgat cctatggaaa tataaggcgt taatttccta caagcatggg 68460 tgagatctga catctgtcaa ctcaagtcat catgctgtga ctccagctgc ccaacctctc 68520 cttacattgt ccagagtatc aacataaagg aagcaaggat accggaaaag tggttttcag 68580 gttggcacat ggaaaatggt aatcaaatat gttggtaatt aaatcaaata tgttggtaac 68640 tccagaggaa taaaagatca tcaagacgtg tctagtctgc ggctggaggc ctagctacag 68700 tttcattgtt tgtatgaagt ccagccagct ccatgcaccc aagttactac tcaataaaga 68760 tggcgttgct aggaagacct ttatccttcc cgactgccca tctttctccc ctgtctgctt 68820 agcagtcagc agacaaccag tatgccatag cacgtgctct cagcgctgaa acacatgcag 68880 ctgcaggcca tggtatccct cttacctcga cttgcgaccc gtatttaatt tcatacatta 68940 ggatcaatcc gttggggttc tcgggttctg gccactttaa aaagatggag ttttcgggtc 69000 ttggctccca ggtcaccgga ccagggatat catctgctcc ttctgcataa ttaatgtaaa 69060

•						
caagcagtca a	PCT attgggttt a	- Sequence	e listing fo aaagaatgat	or submissic aaacggtgtg	on.txt ctaacttgag	69120
aacaactgtt c						69180
tctttcctga g						69240
gccaagtaca a						69300
acctaaaaag t						69360
cagtgagcga c						69420
ctcacacggg a	igggaggaag (	ggccagttcc	gaggctggcc	tctgaggcag	ctgttccggc	69480
cactgtctct t	ccagccacc	gctggcctca	cttctggtgg	tgaaccacag	ctgttgggtg	69540
acagctgatg a	acagccgaga	gaggcctggg	gagataagct	gttctctgtc	tcttctagga	69600
ttgggaaact g						69660
agctcttact (	gccccagttc	ccagcatgct	ttgttctccc	cactgactga	cacctcctcc	69720
acgaatgaga a						69780
gcccacaggc '	tgatctagct	gaccacgagg	acaacgcttc	ctctgcatca	agctttgaga	69840
cctggagggc	ccctcacagg	tctgtggtgt	gctaaggcct	ttgtgctctc	agtctgtagc	69900
ctctggcact	gagagaagac	aggactttag	gagattgggc	ttcaatgaaa	gaagtgatga	69960
aatacgatgt	gttgcttcat	tgcaagcccc	aaagcagtga	gaggcaagtg	cctgtggtct	70020
aaaactcctg	aaacactgag	accaaaataa	acctttcctt	ctggtaagac	aactgccttg	70080
ggtattttgt	aatagcaaca	gaaagctaac	tcattcagct	gtgcacagaa	gggcacaggg	70140
gtgggtgtga	gcatgtgcat	cgtgaaccaa	gccaaggagt	gagagccctg	aaaggggctt	70200
gtaaagagtg	tctatggtta	agtctggatg	ggagctggca	ctaggaatac	attctctgtt	70260
ccttaggcac	ctgacggacg	acgttgtgta	ccaacaacca	cacattcgta	ggcctgaatc	70320
taagggctgt	cagcctcccc	cgccttggct	gtaagttggc	ggcggggcta	cctgccgtac	70380
ctgctggcat	ggttctcgca	aagacgaagt	tggaggcgct	gcagcccagc	ttctcagcct	70440
cgtggttgca	gctgtggata	tcgatgcggt	: acagagtgaa	aggccggagg	ttggagatga	70500
cagtcctctc	cttgttatcc	actctgctct	caaagaaagg	gtactctgto	: tcgaactcct	70560
ccgggtctgt	gatattgtag	gtgtcagcta	a ccgtggtgtt	cctgcttcgg	g ctggacatgg	70620
tcgtgttggc	cacttgcatg	acgtctctcc	gcctccttt	c gggcctgcaa	a ggaggagaaa	
gaaggtcagc	tgctaagttc	tttagtttt	c tttgtcttt	t ccatggctag	g ggtagaagta	
ataggaaagt	cctagccttg	aactaaaag	a aactactta	g gctccttgg	a taagaaccaa	
caaataacca	ggattttcgc	cttcacaac	c catcctgta	c tctcttgag	a catcctcaga	
gaaacatgtg	cacacatggt	tctaggaaa	c agtgtgcca	g ccatttta	g ccagacagto	
ctctgtttta	ccagacagtg	ctacttggt	c aggcctgat	a actgagcat	t caacacgaca	
•					c aaggtagaag	71040
agacccaaag	tccaacagta	ı gtggcttct	t tgatcttct Page	c tgaaatgaa 47	g atgccctagt	71100

PCT - Sequence listing for submission.txt

ttaagcagct agcaagtacc taaatcccag cgcttttcct gaggaacagg gtctcctatt 71160 gatgaatgcc cccagtccct agtacacagc atggtcttgg aggttcatca aacctggctt 71220 tgcatcctcc ttggcagtga gcttgtctgt gataggagcg gagcctctgt tactcactga 71280 cttgtgttag cttaagaaac tacagaaaag caacaggaac agagtctggg gctccctctc 71340 ttccagaaaa aacttctaac attcataaaa actgaaaaaa aaaataaata aaaatatgac 71400 atcagataag cagccctatg ggctggaagc aaccctcagg ttgtctgcag gtgaacagtg 71460 ggcaagctgg gtattgaggc tgttgctggc attgcttgtg acaggacaaa ggatgagagg 71520 aacaggtggg actgcactgc gtctggtaag aacatgacag agtaagacaa aagggagcct 71580 agagtacggt gctcgaggcg ccttggaagc catgcccaag gcctatggat gctccctagg 71640 ccaacatctg ggagagtaca gtagggagtt gggggaaagg gccgcatgct ccctggtctt 71700 cagcagatgg atctgctacc aaaaccatag ttctttgtcg ggtactgaca tgccagtttc 71760 cattgaaagt atatcaactg ccataccagg gcccatctca aaagttagga atggggattt 71820 gttatcataa tgctggggaa agagatagga aatgagggta ctattctacc atgctcacac 71880 ccagcaaacc ataaaccgac caatcaacaa accatggaag gaaagataaa ggaaactact 71940 ttttcaggta tgtgtgtgcg tgcatgcatg tgtgcgtgcg tgtgtgtgtg tgtgtgtgtg 72000 tgtgtgtgtg tgtgtgtggc ggctaggcag atgttcaaaa cattattatt aaatttcctg 72060 cctccctttc aaaccagagc aacacaaacg tgtgccttca tgtaagaagt tgcttgtgtt 72120 tgatttattg caaaatgata ctggtccact tcttgccttg acccaccccc aacaaactgg 72180 gctatagcac caagcagact cagtggcctc cttacttata aacactgcac tcttgcatat 72240 tattcaacag ttactgtgga cacagagtca ggaccatgaa gggaggcaat ataggcatca 72300 gaaggctagg gatgattcaa acagagtggt ccagggggtg gcaaacagca cactatcagc 72360 tttccttact ccataaagta tcctgatgct actggaaaaa cttgtactgt ttaacatctg 72420 agaatgtttt agtgacagaa acatttttga agcgtcttca aaaatgaaga tggcggccaa 72480 tgaaagccat ttactgatac caagtttagg aagtaacttt ataaatagta gcctccactc 72540 tactataaac tcacaggcaa agtcagacaa tgcagaaaga ctaaatctga tatatttgcc 72600 ttcagccccc agataaacgt gcacctagaa tgacatgaag gtaggaatag gttttaggta 72660 aactcggttg tatgatgaca gagttgctcc tgtcatctag ggtgctcctt tatgggacct 72720 tgcgagacct cgtatagatg tcagatcctt gcctcggtag gaggtaaaaa acaaccccc 72780 aaaccctaat ggccaggtgt ggtgacccct atctgcatgc tgggtctgtt ttaggacact 72840 gaggtgagga cacttacacg aaggaatgtg accgagagaa aattcgtttc aaacccacag 72900 tacaagccct gcacggtccc atctgggtca accacagcct tgccgcccaa tcacttagcc 72960 tagcgttaca cagctgatga taacagcagt cacaaagtga tgtcatctga gtataactaa 73020 acaccaaggg ctttctgcta tggtcggtct acccttggtt ctcatgctgt attgttagat 73080

PCT - Sequence listing for submission.txt 73140 gtttggtcac tagtggggca gctgcaggag gaacctttag ggaatggtcc tgttaggggg agatcctgat gtagcaaaca agctaagtgc tcaacgtctg ttcagcttcc tgtctgccct 73200 gaaatcgctg ctgtgccata agtactttgg ccatgcgaca cacccaaaga tgccttcatc 73260 aacaaaagcc acactggctc cttgttcttc taactttaaa actgttgagc tatgcacacc 73320 73380 actaagcatc acgcaatttg ttagcaacaa tgaaagaacg acctaaacct ctggccatgc ctacaggagt cctggatttg actgacaccc agtatagggg tgggtatggg aggacctctg 73440 cctggcctct ttgggacgct ccatacctgg ccactctcat ggctactctt actgagtgtt 73500 ggttcaggtg gaatgctcca catagataac ccaatgaagg gacggaggtt tggtgttgga 73560 gaatgtaggt ctgagaccca agactcaaac agacagtaag ttagtgagga tagaggtcac 73620 tgcatccagt ttttaaagca ccttttgatt tgtttcctgt cttcaggtct ttaaattcaa 73680 agaaacagac atgacacaga ggggaacatg ggtaaaagcc aaaacagcag cgcctcctgt 73740 cagctgactg caatagcagc ccagcagcct gccaaccaac aggagctgct ccgcgtgggg 73800 73860 cagatgggag catgcacagc ctaaggcatc aaatgtagcc tttccaaagg gcacactcac ctgggcacaa agatggaatt gtgaaggaaa ttctcaaaga ctttacggta ctcagcctcc 73920 tccttctcag cctgcttctc agcttcagtt ttagggcaag cgcagcatgg ccctttatca 73980 ccaccacaca cttctgtctt gggattttcc gtcacctcct ccacgtcgat ggtaccatcg 74040 gcgtactttc tgatgggtat tttgtctgct tggggaagac cagagatggg aatgaaagcc 74100 74160 agaagcaagc cctgcaacgt gacaggtgtg accctggggc tcaggttctc tcagacaaca 74220 gacaaggcca gtggcactgc ctgcctgctg cctgccagcc cccagctcac ctttggagca 74280 gtagttgtgc cggtacaggt aaccatcctg gggctgccgc tgccacctca caatgtagta 74340 actcaagtta ccattgggca gagttggagg attccacttc acaatcagct gagaggaaga 74400 gtttgatgct gagaggacat ctaggggaat ggaagggact ggaaagaaga acaaagaaca 74460 tttcagagaa tagaccggaa tccgaggttg aggttatcag gggctcgatg caaaccaaca 74520 74580 ggaagctgca ggcttgacct gggcacagag atagcaacgg accaaccaga gcatgaggtg aaccagagct ttggaaagat taccaactgg gaggccagcc ctctctcaga gcacttgctc 74640 ttagataatc tatgtgcaaa cacacatggc tcactgacct gggactgaag gggctacgag 74700 ggcatagctg gggttaaagg ggactctaaa aaaaaaccta gagttgattc agttatgaca 74760 actgtcattc tccggtgtgt attaggaaat ggcaaattgg acggcttagt acttcacctg 74820 tgattgcaag ttttaatctc tgataaaaac ttgataaaca tgacagggag ccaaaatgaa 74880 gagtgggagt gggggatgga cagtgtgtgg ggtggttatg tgcctgggtg aaaggactgt 74940 gaaacaagga gcagggactc acagatcttg taagcaagtc atgattcagg aaagccagta 75000 cgcctgagcc ctgattctat gcaaagtcct gttacaagca aatgagttta acaaaacgac 75060 ggaggcttac atactactga tgcccaggct caaaagtaga actaacttac gtaaaaagga 75120 Page 49

	aaacatccca g	gaccactgc 1	tgtgtcctca	ccatagcaaa	agagatacca	cagccgaagc	75180
	gcaccccatc c	ccaacacac	acacatgcac	atggcaaaga	atgaggccca	ctggttttgg	75240
	cagtttccaa a	gtgcaagag a	acagaaccgt	ggttatgaca	cttaagaata	aggtccaacc	75300
	aagctgtttt t	gaatctgaa a	aggtgaaaac	aagcttgtac	cggtcagtct	tatgacaact	75360
	tggcacaacc t	atctgacag	aaaaaaacct	caactgagag	gatggctcag	tatgatcagg	75420
	ctgtaaggca g	gcctgcagg	gcatcttctt	aactaatggt	tggtggagga	aatgcccagc	75480
	tcattgtggt g	aggaggcct	ctgggctggt	ggtcctgggg	tctctaagaa	agcaggctga	75540
	gcaagccact g	ggagcaagc	cagtgcttct	ccaaagttcc	tgtctctgct	ggagtttcta	75600
	ccctggcttc c	ttaacggca	gactgtgatc	ctgatgtgga	agtcaaatcc	tttccttgcc	75660
	aggtcatata d	caccacacc	aacaggaagc	gaatggacag	agggctgtta	ggatgtatgc	75720
	ggtgctcaag g	gctctgagaa	ccactgaggg	acaacacgtt	ggaagaccaa	gactgatgca	75780
	gagaagacaa g	gcacttgatg	cctggtcccg	tgagcgtttt	caataagtat	ttccaaaaca	75840
	gtttcttact a	aggtatttca	atgacaagtt	tcccagatga	agcagaggca	catgatggac	75900
	taagtacgtc a	actatcggtc	ccaagcactt	ttgaggtcag	ggaccaaatg	cagtttttaa	75960
•	tatttaggaa	gaagaatagg	atttcttaag	aatctgctat	aatgataaga	aattcctgct	76020
	tagtttttt	ttttttcctc	tcagatctgc	tgcaatgatt	cactgggagt	cattactccc	76080
	aaactttaag	atgagaaatg	tattcagttg	ctttgctctt	ggaacggtga	atatgtttca	76140
	ttgtgttgta	agccactcaa	gtcgatggaa	ttttttgttg	taagaggtca	gtcattatct	76200
	ttacagtgaa	gcatatcttt	ctacctctct	cgtctttgga	tacaaactca	cacctttgct	76260
	tttccccact	tctaggttct	ggagctgggg	aactagtacg	taaacacat	g aagaagatga	76320
	gaagggatta	gtcaataatc	cgatatcata	gtactctaag	cctgcgttcg	g cctgttgaga	76380
	aagctggtgg	ctacggaata	aaggtggaaa	gccagcaago	cactagagge	aaggggtgca	76440
	ccggtcattg	tcgtctcagt	ccctggaagt	ctgcactgag	g agagaggaga	a ccagccacaa	76500
	gtggctacat	cctgggcatt	cagagaaaco	atcctactgo	tctggagga	c accgattcaa	76560
						a tggctcagga	76620
						c aacaagcatc	76680
						t ataaaaattc	76740
						a ttggtgcgaa	76800
						g gtgagggtca	
						t aaaatgccag	
						g ttggagccac	
						c agtcaacaca	
						c ccaggggctg	
			•				

PCT - Sequence listing for submission.txt aacgtgtcac actttctatt tctattggga actccaaata aaactcatca tcaattagat 77160 77220 ttctatacaa aaataaaatc aagcatctgg actcgggagc tcgacagcta tgaaccgcag 77280 aactgacaag cagccttaga gacagcaagt ccctcattca cagggactga aaatgctgcg 77340 tctaagacat gcggatgctc attgtcttct taagtgagag ttaaaaacaa caacaacaac 77400 atcaacaaaa acccaactaa tgaaaaaaaa aaaaacaaaa aacaagcaga gctgtttaat gcaaacaata aactaataaa acacaacttt tggacaaaac taactttcct atccccctag 77460 77520 aactctaaaa tgtaattcga taatagccat ttttatttat ttttatttt actttttgg tttttcgaga caaggtttct ctgtgaagcc ctggctgtcc tggaactcac tctgtagacc 77580 aggctgacct cgaactgcct cccaagtgct gggatcaaag atgtgcacca ccactgcctg 77640 gctcataata gctattttt ttaaacaatt tttttagtag atattttctt catttacatt 77700 tcaaatgcta tcctgaaagt ctcctatacc ctcccccgc cctgctcccc aacccaccca 77760 ctcccacttc ctagccctgg cattcccctg tactggggca tataatcttc acaagaccaa 77820 gggcctctcc tcccaacgat ggccgactag gccatccttt gctacatatg cagctagaaa 77880 cacgagetea gggggtattg gttagtteat attgetgtte etectatagg gttgeagace 77940 ccttcagctc cttggatact ttctctagct cctccattgg gggccctgtg ttccatccaa 78000 tagatgaatg tgagcattca cttctgtatt tgccaggcac tggcatagcc tcacaagaga 78060 cagctatatc tgggtcatgt cagcaaaatc ttgctggtgt atgcaatagt gtctgcgttt 78120 ggtggctgag ataatagcta ttttcgatgc ttaactatct cataatattc caacactttg 78180 tttcctgatt gtctcagaga gtggcattgg tgataccacc agttagcatc gccagtgcac 78240 tggcagcact ttcaaaggga agggagggct ctgcacagat gcatggtagg cggggtgtct 78300 actttgacga gatgcaaggg ctgctagcta ctggcttctg aaattatgct gacatgactt 78360 gtgttcgatc acgatgggag aggggtggcc cccatttaca caaacactga gtgattttga 78420 gctttctatt ttccctgggc tataacagtt cccaggaccc taggtcaagt ggcagcgaag 78480 ataccaggca ctgccaccag cacctttgct tctggaaaga tcagtgcctg ggaaaacgga 78540 tgaccacaca gactggggaa accacctggc cacaggaggc tgagtaggaa aatgggacag 78600 ctcaggaagc tgtgatgtgg agtaagcagg atggtcctat caggaactgc tgacacctag 78660 gttcgtccct cactattctt taatgctaga gggctcatgg cccagagcaa agtcttggca 78720 aggccatgca tgcatcaagt gactggaaga caatgggtca gttcagggta gccttggtga 78780 gaacagagca ccccatgggg tattttgggg gacagaggct aagacaatat ttaaccaagt 78840 ccacataatg gcttatgaca gtttggaggc attcagttct cttaaaattc atcccctttc 78900 cccttggggt gaacttactc aaacaccata taaacaatga aagggctgag gcgggacact 78960 ctcctgacta gctgctgtct caggttggga cagtttaata tgacaactag agaggtcaca 79020 tgaggatgag gtgacggtcg cctgacttga ttctttatag gtacaccaaa gactctctat 79080 tcagccaagt cacactgcca cctggccgtc cccaccctca agcttgacat cagagtgaga 79140 Page 51

ç	ggcccaaact	cacgcctcct	tgtagtaaac	tgtgaagctg	atgagatccc	ggtagtccgg	79200
•	cggccggtac	cggtgccacg	ttatgatgat	tcggttcttc	caggtcgtgg	tggaggtgaa	79260
;	acggagaaca	tcactttcac	ctggggcaca	gaggcacatc	catgagtgac	agaaacccat	79320
	ccgtctctgt	gatgtcactc	tgagagaaaa	ccctgactgt	gcttccaaag	gcaaatctat	79380
,	ggctggcgca	ctcatgacct	gtcaggtcag	gctggctgcc	cctaagggag	aagccctttg	79440
	aaatgctccg	atcacaggct	tctgctatgt	tcttgatggg	gaacaggtca	gggggctctg	79500
	cagaaaggtg	agggtgctgg	ctgtgtacac	acttaccacc	tctgcctaac	tactcttctc	79560
	aagatgcctc	ctggatccgt	agagtatcag	ataaatctgg	atactcaaaa	gacaaggcta	79620
	gccctcccc	cacatgtatg	cacacgtctg	actagctgtt	ggtcacacag	ctcctgattc	79680
	cccactaatg	ctatataatg	acggagggtc	aaatagagct	ttagtatttc	tgtttgtttg	79740
	tttttgtttc	cttaaaacag	ggttttagat	gtagcccaag	ctggcttcaa	actcacaatc	79800
	ctcctgcctc	agcctgttaa	gtggtgagat	tataggagtg	taccatcatg	cctagctcca	79860
	tacagtgcta	gaggagagac	tgacatccag	gtctgggacc	acatttggag	aggggctggg	79920
	ttaacaggtt	gaactctagg	ctatgagatc	ttagggtgaa	aactctcatc	accaggatgg	79980
	aattattact	ttgtccaaca	tgtgaaaagc	attccgattc	aaagacatgg	gctcactttg	80040
	ttctagaagg	agcagggcag	agaaaggagg	ccaagtgtga	ggacaaggac	actggacgtc	80100
	cacggaagta	ttatagtgga	gcatctaccc	tgatccttct	atggcacagg	agagaaaggc	80160
	agagctgacc	tggagtggac	tggctcttcg	gtaaatattg	tttgctcata	ttgaaaaggt	80220
	atttaactgt	gcaagctcta	agaacctgct	tggatgttta	atagactcaa	atggaccctt	80280
	agaaaaatat	atcagtatga	gtgtatcagg	cacccgccca	ctaatatgca	gaggccaggc	80340
	actggctgca	gtggtttgac	agtccatggt	gaaacaaaga	gcccgcccac	ggatgccaaa	80400
	gactgttatc	tggactgtgg	cagtcccagg	ggtctgagat	gctgtcacto	acaggaagct	80460
	cgctctccgt	tgttcctggt	gtttatgtcc	cctttgctct	ggcgtccctt	ggttccggtc	80520
	acttcctcca	tgcggtaaat	ttcggagaca	cacagcttgg	gattgaaago	aaagtacatc	80580
	tttccggacc	tgacggtcag	gttccggtgg	ttccagtccc	: acagctgctg	caagttctgg	80640
	ttgtctagga	catagaagga	gtagttcctg	gaagcacaga	aatgcgcatt	: agcaacgcac	80700
	tgagcccaca	gcccctcag	gcgacagaga	gcctctctg	ggccagtgta	gttccatacc	80760
	aacaaggggt	ttgcttgctt	: actggggctt	tataacagca	a gacagtggcg	gtagccactg	80820
	gcaaaaagat	gtgccaagga	caatgttttg	g aaatcgactg	g gacactaati	: aatttcatga	80880
	cctctattac	caacacaca	agcttctcc	accaaagga	t gttccttga	tcattccctg	80940
	ggaaaatgco	tttggttatt	tctctcaga	g ccaggtatg	g acaatgtgc	t tgaaatcagc	81000
	ctacaggcga	acagacatgo	tccgctacte	c aaccggaac	a gcttacata	c tagcagcaaa	81060
	ggctgccatt	: atccctagga	a ataaatcct	a cccatgccc	a atcagcagt	g catgatggga	81120

PCT - Sequence listing for submission.txt tgggagacag cctggctctc tgtacatttg cctctcgctg caagaagcct tcatttcagt 81180 ccctgagtac gtgggagagg acagacatcc agtgtctccc tgggctctca catcagggta 81240 gctagatgca gcgtgtaaca tggtggcttt ccacatttag tatgtacaca gcttgttctc 81300 agtatcccct accgctagag cttctggtgc agaggtccag agtgcaccag gaatctcgat 81360 gtctagcagg taatgctgat aaacaccagt cctgggtcca cccagaaact accaggccgg 81420 ccacggcact gtttccaagg cctaacttcc actagagggg agatatgggc atggccaaag 81480 81540 ggaagatagc tatcttaggg ggccaagggg agagcaagga ttctacttgg gtgtctgcat aagttttttt tttttttta aacagttatt tctaaatcca cccacagacc agacaaacat 81600 gtcccaaagt cctgttctgc cctaaaggct gtgtccacct aggcaccacc tgctgagagt 81660 cctcacccac attagaacta ctgcctaggg ggtctgcttt caacatgacc ttcacatact 81720 gagaaatgag ttacagctgc agggttgcca agcctctccc gacacttcct ggagaactca 81780 ttagggagct cagaggccag gacccaggac cggaagagcc atgaattccc cacaggacaa 81840 gccacaggea gtttcctcgg tgctatgaag agcagcgttc atgtgcgtag gtgaagtctg 81900 aggtctcgtt ggttttaaga ttccttatga gagccagtga gatggctcat gcgtgcaaga 81960 gtacttacat cacaagtctg gtgatcagga ccccgagaag gaagaacagt tactgtgtaa 82020 82080 ggctgtcctc tgacctctgc acatacatcc ctctcatagg taagagtcct cacatggagg agtcggagct caagtgtgag ctaagcagtt gaatggaagc cccaaccctc cttgagcact 82140 tctgcgcagg cttcagcgca gggtctgcac acgcacgggc tcaatgagcc gctagccttt 82200 ggtaaggagt gttcccctac catgcttgtt tattggagta ggaaacaaag accctgatca 82260 aaggaatcca gatcgtagta cctaagagtg tatgtcctag ggaggtcctt ggatacctgt 82320 cagtcagaac tgccacctac gggacccacc aatgttcact cttattgata tgggggtggt 82380 caggataggc agacaactga aggataggtg taatggtgga aagattgggt cccattaggt 82440 gtcttgccta accatgggcc attcttaaac tgctgcctca acgctaacct caccggtctg 82500 gctgctccca agtcttgaga gtcccaggag acaaaaatct cctgttattg aagacacctc 82560 caggccggat acaagggcca actaatcagg tcaaactccc atctccatct aggccaaggc 82620 82680 ctcttagtaa actaatttct caagcaggaa acagaattgt actgaaaata ccttccttct gagccacaca ttcttctccc cagggaggga gcatgaatta gaaaccagga atttgacaaa 82740 tgaatggcag gcacatagaa actcagggta tttgactaat cactttgaaa agcaagatta 82800 tcttttcaca gtaaacacaa actttctctc tttaaacaat gcagagaagg ctgggagcca 82860 gaataccaat atcaataaaa tccaggcatt gtggagccta cagaaggtaa agaaaaataa 82920 aaaccttcac caaaataata atcaacctgc tggggagggc ccgtccacac agtgcctgct 82980 tcccaacccc cacccgaggc ctgcctcctc aacaccttct gcaatagtga gagttaagag 83040 atatccccag gtggagattt gtctacacac cttcaagata ctaatgtcct tgaatggtca 83100 ttgttttctc agggagatga ctagttaagg gaaccactca ataaatgcga cttcataaat 83160 Page 53

		•				
		ttttacatcc				83220
tttttttcc	tttggctcct	acacgctgta	tgatctcccg	gagttttatt	gagtggtatt	83280
ttggctctta	gttcgatcct	tccttctttc	ctaccttcct	ttctgcaccc	ccccacccc	83340
ctcaagacag	ggtttctctg	tgtagccctg	gctgtcctgg	aacttactct	gtagaccagg	83400
ctggcctaga	actcagaaat	ccacctgcct	ctgcctccca	agtgctggga	ctaaagaaat	83460
gtgccaccac	tgcctggtag	cttgtagctt	tttcaacatt	agaaaaaaa	atcccctcta	83520
ttggatgggt	ttcacctgcc	aatgcataga	cctactagga	tggttagtca	acaatttggg	83580
ggccctgtca	catgataagc	tcacagccaa	cacttagcta	tgatctgtgg	ctaccatttc	83640
taggcctccc	ttttaagtga	agactgcagg	ggaccgagtg	tagagtcttc	catgtaggaa	83700
ctgataacca	ggcccaagca	ccttctccac	tgcttatgaa	gtggcacctg	aatggtttac	83760
tcagcttctc	tagggctgct	ggttctcagc	tgcccatgga	gctatcttt	ctggtctctt	83820
cgggccccga	ggccaattga	gaagaactgg	atgctaaata	taaaaggacg	ttataagctt	83880
tgaatcacct	cacaaaggca	caggatgacc	tgtgctactc	tctgaactgt	caaaagtccc	83940
ccagaacaaa	gtcacagaaa	ataggtaagt	cctgcacctt	gatacaggca	gggctgagct	84000
caaggtctcc	agcctacaca	ggacccctct	ttcaagctct	tactggcato	ctggaagcac	84060
agacaaccaa	taactcatat	ccatttttgc	: aaggagacac	tactactgc	tgtgacagct	84120
gtctctagag	ggcatcagaa	gccagtacad	tgaagctgtc	: accagtacag	g tcatttataa	84180
cactacttag	cccatctgta	gaatattggt	tcacttcagg	tccacagtta	a taccatctac	84240
aaaggctcag	g ttagtatgga	a aatatatac	caggcaaaa	taaaccaag	c accacataga	84300
ttgacaaaa	t aggccgtttg	ttcctgagtg	g ctttttaaaa	a acagctttg	c tgaggtacgt	84360
tttaccttc	t aaaattgtt	c ccactataa	a tatacagcto	c catgggctt	c aataaattta	84420
tacagatgg	c caatcatct	t tcaatcatc	c agattcaga	a catttatat	c aaactgaagc	84480
ccccccc	c attcttctc	c catccaagg	c atttcccct	g tctgttcac	c caggatgcta	84540
catgtacca	t tggctagta	t cttactgtg	t gttttgcgc	t tatactgag	g aacccctaga	84600
					g agcattcaca	84660
					t tgctaggcaa	
					g gttatgttag	
					a gggtagagat	
					t tttgttctgt	
					it ttgattgctc	
					a atattttctc	
					t tccttcttaa	
					ac acactctagg	
	_					

PCT/CA2004/001674 WO 2005/026386

PCT - Sequence listing for submission.txt ttaagtgctc tatcactaca ccacaccact acttctgaga aaaccctttc ctttctgtgt 85200 ctgtccttga gtacacagac gtgcaggctt ctggacacag gagagagaca ctgggcatcc 85260 tcctgttact ctctacccca ctgtcctgaa acaggctgtc tcacggagtc tggctcaggt 85320 caggcaggtc atctgactag caagttcttg ggatcagtct gtctcagctc accacctgga 85380 gctactcctg ggtgcagcta ggctcagtca cgccgaggat tcaaacacga ggcctcatga 85440 ttgccaagca agtacactta gctagggagt catctctcca actcctatga tcttatctga 85500 agttgggatt ctacagctat gccacactac agagagagtg atggctgaga ccaaagggtc 85560 ctgctgctac ccaagtaccg ttctgtggct gtgcaccctg atgtctgctc tgctgggatt 85620 ctgcttcacc tgtcgtcggc ctggaaatca gtgtacagaa atgtggcctg atgagcatgc 85680 atgacccagg taagcaggcc cagaaagaaa acacaggaac tacacgccag gcaaaacact 85740 tgtgttccca cggggggcta ccgagaaggc caagatcaac tgcagtgctt tcctggatag 85800 ctaaggctga aggatacctt catgggggtg gggggtgggg tgggggggaaa tattcctctt 85860 tccatcaaga cagaagtett cagaateete etgageegea eggaageatt tatgeeattt 85920 tcagtagcca tacaaaaagc tcaagaaata gattccttca acactgagtt gaggcaagat 85980 tgcttaaaaa taaaataaa tataaaataa aataaaaact cagaagtggc ctgggactat 86040 atacatttga aggatcacag ggatagcgaa gtcatttcta atctttgcca tgtgccaaac 86100 86160 atacacagaa atactcagaa agttactcga gcttatgctg gcaactcccc caccccaagt tttctgtctg acttggggtg aggtgaacct ggtgaagttc cacagggctc ccctttccct 86220 gtaactgtga tgtatccaca cattctggga aacactgggg ggagggggag gaggctatca 86280 gtataaacga cagcaccctg aaattaaatg tcagataact ctgctaatac acccctcctc 86340 aaaatctcca gtgcgtccca aggcttacct aaatgataac ctctacatct gcatgcaaca 86400 gtgcctccta taatcctagt actgcctacc tcccccagga gctgaacaca agacaggccc 86460 aaatgtcatt ctgtgctctc tcctcttctg tccctgtgct ttctagtccc ccaaaccctt 86520 ccaggccagc tttgctcaga agcctgtgtg gccttctcca ccagagtctt ccttttggta 86580 cccagagcac cttctgtcct ctcctctggg gctctctgaa gcctgtgctt tgcactacct 86640 gtgttcatct gcttattaca aatctttctc tcctttatta aataagtgag gaagaagtga 86700 accagctgag ccctaatact atacaacgag agacaaaggt gagttgttgc tatgggtggc 86760 ccctcaaagc tttggatttc atcacagtta ccagagaaag ctactactaa agagtctcaa 86820 atgtcctggc cagagatatc cttgaagcaa gaggctctca acctgtgggt ttagattcct 86880 ttgaggtcaa atatcagaca tccttcatat catgcattta cattacaatt cataacagta 86940 gtaaaattac agatatgacg tagcaatgaa tagattatgg ttgggggtca ccactacatg 87000 aggaactgta ttaaagggtg gcagtactgg aaggctgaga aacactgttt tttaacacaa 87060 gtctccaggc ctcacctgcc ctccactccc ttctcaaatg ctaacagcag ggctggcgtc 87120 agctttccag ggaagcttcc ccaataccag aatccttaac aatacttggc tgatatttat 87180

Page 55

		•	_			
agtagccaga a	gctggaaac	aacctagatg	tccctcaaca	gaggaatgga	tacagaaaat	87240
gtggtacatt t	acacaatgg	agtactactc	agctattaaa	aacaatgact	tcttgaaatt	87300
tgcaggcaaa t	ggatggatc	tagaaaatat	catcctgagt	gaggtaactc	aagtcacaaa	87360
agaacagata 1	ggtatggac	tcactgataa	gtgggtacta	ggcagaaagc	atggaatacc	87420
cacaatacaa d	tcatggacc	acatgaagct	caagaggaag	accaaagagt	ggatgcttca	87480
tcctacttag a	agggagaac	aatataatca	agggaagtag	agggtgggag	ggatttggga	87540
agaagaaagg a	agggggaggg	gaaaagaggg	tgcagagtca	ggtattgaag	gagctagagg	87600
agatgtacag	agggtcagga	aattgaacag	aggggatggg	gaactggagg	tagcaaccac	87660
aaagtcccag	atgcgaggaa	agcaagagcc	tcccaggacc	ccatggagat	gacattagct	87720
gaaataaccc	acaaagggga	aggagaacct	gtcaagacca	tatccagagg	ttagactgcc	87780
ccccaccccc	gttgaaggat	ggggcaaccc	acccatcttc	aaagttttaa	ctcagaattg	87840
ctcctgtcta	aaggaaatac	agggacaaag	agtggagcag	agactgaagg	aaagtccatc	87900
cagagactgt	cctacctggg	gatccatctc	acacgcagac	accaaaccca	gacactattt	87960
attgctgatg	ccaagaagtg	cttgctgaca	ggagcctgat	acagctccct	cctgagaggc	88020
tctgccagat	cctgaccaat	acagatgaag	aggctggcag	ccaaatatca	gactaagcac	88080
agggacccca	atggagaagt	tagaggaaga	actgaaggag	ctgaaggggc	cttatctggc	88140
atcaatggga	ggggaggccc	ttggtcctgt	aaaggcttga	tgccctagtg	tagaggaatg	88200
ctagggcagt	gaggtgggac	tgggtgggtg	ggggagcacc	cgcatagaag	cagggtaagg	88260
tgggatggga	tagagggttt	gcagagggga	aaccaggaaa	aaggataaca	tttgaaatgt	88320
aaacaaataa	aatactcatt	taaaaaaaa	aaagacttgg	ctggtacttc	atacctaagt	88380
tttgaataat	gaaaaaatag	gctataaata	ttcttggaaa	taaaaaccag	ccttcaattt	88440
tcagcaacat	ctaagtgtat	gatactttta	gttaaggcat	aatgataaga	taatcatacc	88500
atgtaataat	cctgataaga	aataatcaaa	gcctcctttt	gactttctat	gcctatcgct	88560
tgctcagtgt	ggaaaaaagg	ggtgggggag	cttatcctcc	: agtaactaac	agatctgaca	88620
gctactaatc	cgccaaggaa	aacgtgcttc	ccgatgtcag	ggagtatagg	gcacagatct	88680
actgggggga	cataatgaaa	cgagatggag	ttacagttca	ctttaaaatt	taatacaagc	88740
aacaatgaat	taagggtgac	cacggcctca	tgtacgggag	gccccagaat	gattgcgaca	88800
ctctgggcag	ggtacctggc	: acatgcagaa	ı ggattcgcaa	a ggagaaggag	g gtttttctga	88860
agcttctctg	ctcgcaatgg	gaagatggad	ggggtgagca	a gctctgttt	tggctgtatg	88920
taccagggga	agacccaggo	cagagttgg1	gtgagaaaa	a ctggaggtt	g taaagaaacc	88980
tcatccagac	ataccagcct	ggggacaago	cttctccgg	a tcttcccgt	c actgtctttc	89040
taagggccct	gattgcttag	ttaatacac	g tataaaact	t caaagcatt	a acacagagct	89100
acaccagagc	cgtagcaaat	gtctgaagg	g gccagcaag	g gcacacagg	c cagagtctgg	89160

PCT - Sequence listing for submission.txt 89220 aaagaagctg tgtgcacatg cagtaagcac cagctttact ctctgctgag aaacccacgg 89280 ctgctttaaa acccagcttg caaagcattt ctgtgcagaa ggcacaaccc ctatcaatac tccaaatcct gaaagctgat caatacacag acgctgtaag ctaatcaatg tacaagctct 89340 gcaagctgaa atatctctgt aataaaatga actgtccgta ctttgcaatt ctttctgctt 89400 89460 ctctgtttga aaaggagatg gcttgggtgt caggtgctca agtgcttgct gtacaagaga 89520 acccacgtaa catgtgcctg aaatctcagc acttagaaag tggacacagg gacatctctg aggcttgtca gccagttagt ctacaaactg gtgagctcca cgttcattga gagacatact 89580 caaaagataa gatagagaaa aaagacaccc tgtgtctcct tgaacctcca gagggtgtgc 89640 89700 acaaatatat acatgcatac aaatgcattc tctctctct tcacacacac acacacac 89760 acacacaca acacacaca accccagage acagtagget gaggeaggtt aagtgteaga tgaatcacaa tttccctggg agttaagcac cacaggcagg ctgctgtcac tcctgcagga 89820 89880 aaggttccct gggaatacct tggactgcta gaactcagcg ccctagctta gactcgtgtg 89940 gtggtttgga tgagaaatgt cacccatggg gtcacacatt tgaacgaacg gccccaggag ttggtgctac ttggggaggc tgtggaacct ctgggaggtg ctgccttgct ggaggaagtg 90000 90060 caccaggagt gggctttggg ggttcagggc cttacctcat ttcctgtctc atgtttgcag 90120 tttgagatgt gagctctaac cttttgtctt gcctgcttat tgccatgcct ctcccaccgt tacggatgct ccccattata agctcctcct tccctaaggc attttggtca tggtgtctca 90180 tcacggcaac aaaaagtgta actactacga tatgcaaccc ttgatgactg caccttaaga 90240 90300 atgaagacac ccatttgcca aattgttagt atcctgtgac aactccacag gacttagagc aggaaggtgg gtgaccacct aggcagcagg agcaggccca gggtttcacc ttcattctgc 90360 90420 gtaacaaacc caaggatatt tgaaaagtac actaatcggg gctgggagct ggctcagccc ctaagggtaa gggcagctgc tgtcaggtgc ctacaacgag tggagttgaa cccccaggag 90480 ccacttgaca aaaggagaga ctgactccca caagttgtat tctgacacac atacacacac 90540 acacacaca acacacaca acacacaca acacacaa acactattaa gacgcagcac 90600 gccacagttc tgtgaaagga gaatggagtg tttacccttc cagctgctcc tctcctaaga 90660 tgagacgaag gttcttcagg aaggacaagg agaccaaggc atgagaatgg cggatcttca 90720 cgtagccggt caccacctcg atgagcccca tgaagttctc caactccgag gcaatgttat 90780 ctagagaaag aggagtccat gtcaccgagt cttcctctgg tcaggtggcg cactatactc 90840 90900 agattcacac acactggtgt ggatgcgaag gggaagcagg tcttgcgtgg gggaattgca gtgagaaggc tggcatagca ccaaccgtcc ctgtctccac tctccgcaag ccacaccggg 90960 acaaggcctc tgaggcggga aagcagactt ctaggaggct ggctgctgca gttgccaagc 91020 tgattaacag aacgtgaaat cagaaatgcc aggctgctaa ttagccccag ctgacaaatg 91080 gaggcaacat ctcttagata tgctcagtga caggcagtcc tggctccaca gtgccatggc 91140 aggactgggc aaacctgtcc cagcctggta agaatggtct ttgctggacc tggagttcca 91200 Page 57

PCT - Sequence listing for submission.txt

tatttaaaga ctccatttag ggctgcagga aaacactcca atatcacagc aatgatgcat 91260 gcaggtagtt gatctatctt tccccacct ggatcgagac agggtttcat gtatgctaga 91320 cttaagatga ggctgaactc ctgatcttcc tgcttcctct ccctgatccc tattcctggc 91380 91440 ctctctctaa ataatttctg catctctaag ttttctatcc tgctcataat tacttctgta 91500 accagaaagt tgccaggaaa agttgctaat gtaacaggac cgagagccag tgaatttctt 91560 ttatcgtgct tacccacctt tcacatagca agtaacataa actttggttc atgacaaaat 91620 tctaagacta taataaatta ggtgaatggg atttttatta tatctgattc ttgaaggttg 91680 atttggtgaa agtttctcct atggtttgat ataaagaaga ggacaaaagc cttatactaa 91740 gtctgagcct cacagagtcc cctcacttgc aaaatacata cagtgctagt tgtatgtaag 91800 ggctacaggg aattcaacct gaaaaaaaga gtggctgcgg ctaagcctgt gttttgttcc 91860 ccaagaattg aatctataac ccctgtgtgc aagacaagtg ctctggccgc cctgaactca 91920 ctctgtagac caggctagtc tcgaattcag agatctgcct gcctctgcct cagaagcact 91980 aggatgaaag gtgtcttcac tgtgtagacc aggctagcct cgagttcaga gatctgcctg 92040 cctctgcctc agaagcacta ggatgaaagg tgtcttcact gtgtagacca ggctagcctc 92100 gagttcagag atctgcctgc ctctgcctca gaagcactag gatgaaaggt gtcttcactg 92160 tgtagaccag gctagcctca agttcagaga tctgcctgcc tctgcctcag aagcactagg 92220 atgaaaggtg tcttcactgt ggagaccagg ctagcctcaa attcagagat ctgcctgcct 92280 92340 ctgcctcaga agcactagga tgaaagttgt ctgtcaccac acccagtaag taattcttct tcatgggctg aatttcccaa tcacattgat ctcccatgac aggaagatat aaaaacagta 92400 aggtttatga attttaaaag gcatgtcttg ggatcaataa actcaaagaa aattaataga 92460 tctggtatga gcaaaactac aatttggtta ttaacataag ggtcagcgtt cttgtgtggg 92520 gaacagggcc ctccattgtg gaagggtaga gaatgggcaa taaaaactaa ggacttgggg 92580 gctcgagaga tggctcagca gttaagagca ctgactgctc ttccaaaggt cctgagttca 92640 aatcacagca actacatggt ggctcacaac tatccataat gagatctgat gccctattct 92700 ggggtgtctg aagacagcta cagtgcactt acatataata aatcaatcaa tcaatcaatc 92760 aatcaatctt aaagaaacaa acaaacaaac agacaaatgc ccaagcctca aaaactcact 92820 92880 92940 ctattacctc tacagactaa gaatataatt cacttattta acaaatactt aggggcaagc 93000 aatccactat aaataaagag gacactttgt ctctgaagta aagaaaaact ttctttccct 93060 aaagatttac cagtaaagat taaaataata gtcttctgcc tatagtattt tacctcatga 93120 aactactagt agctcaacct agaagttcta gtggcaggaa ctgaagggca tctatctagg 93180

PCT - Sequence listing for submission.txt ggactttctc tgtcagtcca agactagaga agataagatt acagggctct gctgccacca 93240 tgggagatgt tgttcatgaa tacaattctg aagcaacatc ccaggagcgc tgtctacacc 93300 93360 aaqtgaagaa agggagtctg caggctcaga ccacagcttg aggtgtggat ggcacatctt 93420 tctggctctg agaggtaaaa caggagatca ctctttaatc tttcctttgc tcagtctcct 93480 caacggaggc aagcaaccca aactctggcc ttacagaagt gtggactctg cagcagctag 93540 catgagccag ccatgggtct gagccatcag aggtgtgtgt gtgtgtgtgt gagagagagt 93600 93660 gagagagaga gagaacaggc ctttcctgcg taagatgtga cttaaagaaa gacgagggct 93720 gatcctcttt acaggagtat attctgggct aatggctcaa acatcgactg tctttctatc 93780 tggattttat gtttccgaga aactcacagg ggaggcgtca cacaagaggc ttacttacat 93840 93900 cccgtgctgc ttttctaagc ctgtattctg cttgtgacta aagggacaga gccaggaaga gcatcgacgc aagtaaacca agaagcggtc cagccactgg tctggtgggg tggagtactt 93960 94020 actgcctctc cggatgttaa taagcagatt gcccttcagg atggtgcatc cttggagcat 94080 ttgagcagaa gtcaccgaat cgatggtttt cgttttcttc tcttcatcgc cgcagacttt ggggcagggg ccttcgcagg ggatacagta catgctggtg aagataaaga gtggaccaaa 94140 94200 agaaaagtaa ggaggctttt tgtttgttat tacagcagca tttcatgaaa gaaccaggct 94260 94320 gaaacatcca aacaatcaca cagtataatc tcctacccag ggcaagccat ccaagctgca 94380 aacacacaga gggaacacag actgcagaag aggaaagcat gtcgcttgtt tttagacaga atacacttcc catgcaagaa gcatgtgggt atcataggct tgtggctggg gagccagctg 94440 gtctacctgg gagacacaga ctcacaggca ctctggggct ctgaataaat ggagctgctc 94500 actgatgaga ccctcgcctg cctgcatgcc agaggaggtt gggcaagctg gcagcgctgg 94560 94620 ggaagggaca gccgcatctt tgtcactaac aggagtctaa ttcccaaagc ccagggagag attccaacag gtacctggcg cagtgcaggt ccattatttt cttgctaaag cacaagtgaa 94680 tttatatctt gacagtgctt tgcagaaact tgtaaattga tccaaatgtt gttttgctgc 94740 94800 acatacaata aaagccagga acctccgcag ctctctaatg aggtccttgt ccgaatgcta ccctcagtgc cacacacac ctggagccag aagcagtggc atgcttcctg cttcctgccc 94860 94920 atcatttagg aaacggcaga gaagatgcta agcctggggc tataccttct gagaccttag 94980 cctgtataca gaataagggc cgagaagctg ggtcgatttc tgaatgagaa aaatgaccca atcttctgga atgggtggga cagtgttata ttcaaattac tgctcttaaa tgagtccgtg 95040 95100 aaacctcacg aaaagaaaga aaatcagggt aaagcaagag ctgcctttac taaagtcttc catccgttcc caaaatacta tctatagtct gttttgttta aaaaccttaa tagttctctg 95160 ttatcttcct atttcctatt aggagagtgg ggctgaggtt ttcacaggct cccatgggaa 95220 Page 59

ç	gtggacctag	ctagccaaag	tgggggacat	ctggcttcct	ataataccac	atgcaacatg	95280
(	ttgtggtgt	tggaacgaga	atggccccat	agactcatgc	atttgaaggc	tcagtcccta	95340
ć	gctaacagaa	ctgcttggga	aggattagga	ggcgtctggt	gctgagctct	cagttatttc	95400
(	cttcactcca	ccatctggga	tcctgccctt	tgaaatcaca	agccaaatta	gacatacttc	95460
1	tgtatacgca	gctaaggtca	tgacatttta	tcacagcact	agagaagaaa	ctaagacagc	95520
•	tctcatttct	agcctggaga	ggggtttcct	tctgaacttt	ctttgtgctc	tgtttgtgtt	95580
	tttctcattt	aactacatga	cgcataaaac	ccagctctct	ctaaaaacaa	acaaacaaac	95640
	aaaaacataċ	ttggaataac	tgcagcttca	tacacagacc	cgtgcagaca	gtacagagca	95700
	cccgtgtact	ttccacccaa	cgctcccaac	tgctgctaca	tccaacataa	cgataacaca	95760
	gtgacctggc	acgcgtgtca	ggttctgtgc	atttctccat	ctgtctacat	agacctgtaa	95820
	attccctact	gcaatcgagt	tcgaggacaa	cttcaacaaa	gtcctcctgt	gtgttgcctg	95880
	tttgtagctg	ccctctgacc	tgccccagac	ttcactatcc	ctaactcccg	gtaactgcca	95940
	aggtgtcttc	tactgccacc	ttgggaaatg	ttacagaaag	gcagtcatat	agcacatggc	96000
	ttctgaggct	gatgtgcttc	ccaatgtaca	acacccttga	agttaaacct	tcctttacct	96060
	ctcctggtga	tgttctgtgg	ggaggcctgc	tttcctactt	attgtaccag	atatctgagt	96120
	tgtcctcact	tcctggtatt	acaaacaaag	aggctacaga	caagtacatg	aaataaacgt	96180
	tcagggtcaa	catgactatg	tttattcttt	ccccatttt	tttttatcca	aataggaaaa	96240
	cctggagcca	cctcccgctt	tgttaaaatg	tctaggaatc	atttagcaat	tgaaaacatg	96300
	tctataaggg	tgtgttctga	ttatagctta	agtttcctaa	aacccactct	tgtatagaca	96360
	gagcacaaac	agtatttca	aaatacttto	aagcaagtgc	taaataggct	tcaaaggcca	96420
	gcagagggad	: agctattatt	tcttgatagt	attttaattt	aaaatgggag	agactgtgag	96480
	aacgggcagg	gagcagcagc	ccagtgcttt	: aagagcacac	: tggagggaag	gagacccaac	96540
	tcctatgaag	g acacagcato	ctcactgtgt	gttacaggad	agttgaatgo	ctttcagtag	96600
	ggagaggaaa	a taaacttgca	ggtcaaatat	gatatagtga	gtttgatggc	cagctctccc	96660
	tcttttttt	ttttaattt	tattaggta	tttcctcatt	tacatttcca	atgctatctc	96720
	aaaagtccc	catacccac	ccccactc	cctattcaco	cactcccct	ttttggccct	96780
	ggcgttccc	c tgtactggg	g catataaag	t ttgcaagtc	aatgggccto	tctttccagt	96840
	gatggccga	c taggccatc	t tttgataca	t atgcagctag	g agtcaagago	tccggggtac	96900
						tccttgggta	
						tctgagcatc	
						tccctcttac	
						g gactgtgggt	
	_					g gtacatacac	
	_						

PCT - Sequence listing för šubmission.txt cccttttcta tgctaaaagt gattatttag atgtaaaggg cctctaaagg cttatctagt 97260 aacagcttag tcaacagctc aacaaggtag ggtttactag aaggcctgtc tgtccttggc 97320 acatgccaaa agcaatggac ccaagagcta aaaccaacct cccccctcct cttcttcatc 97380 ctcctcctcc tcctcttcct cttcttcata aactgatcac cctaagtatt ttgttacagt 97440 aaccgagagt tgactaacag agactgccaa cacatgaata aaaaaatggc agacttattt 97500 97560 ttagtagact gtattataca attctgagtc attgtagtcc ctggcttacc aaatcattta 97620 aaaatatttg atcttttcct ttttactgtg ataatggtgc agaaattaaa caggtaggaa 97680 tttacttttc atcttagtat tatgaaagaa aatgtaatct ttggtttgat ccagcagtca gcttacagtt agagacatct ccaaatacta tagcagcaat ggaatttctt tttgaagatg 97740 tactgaacat cttttataga gagtgactgt agcaaaacta tacattttat atacttacag 97800 aattgttagc aatgctggag actggaccta ggtccttcta tgtgccagag attggatcta 97860 ggaccttcta caaggtgggg actggatcca gggcatctca caagtgtggg cagtattcag 97920 97980 aacttcctag ttgtattttc agaggctcag aaatgtgtat gtgtgtacag taccggaggc agggaatgaa ttacaatgga accttccccc aaagtcctct gctctgttca ggggaggaaa 98040 caacaacctc agacctctga ctgtcctgtg tttccagagt tataaaatcc tgtcttcacg 98100 aacatcaccc atgacgagtt tgtggaagta cagcttgttc agtcagaaac agctctgctt 98160 ccacagtgaa gcctcagagt ccaggaagga aaaccagagg ccacaaagat ggtggaaggc 98220 ttagagaaag gaggttctgg cagaaaacat ggcagatcag actactagtt catgcccaga 98280 gcccaggctt gcaatgagac atgggagacc tgtttccagg cctcatgaat gctggtgagg 98340 gttgtcttca ctctctcta gactgagagg caaagctttc actggcctag agtagcaagc 98400 tgggaaggag tatctgtagt taaagtctcc accgctcatg cttcagcttt gcaggtgcac 98460 98520 ggggagcaag gctcgggagc acctggccag caagctaatt cttacgctct agtgctagca aggcaccctc aaagtttaga aataaaaaag caagctgaaa cagacccacc actccaagat 98580 tcgcattaaa acaagctcag ccatcaccct ctgacagacc catctgggtg aacccctggg 98640 aggtcctaca cttaggggct atgcagcaga gaaccctcct gggcctaggg acaagagccg 98700 ctgacctctg ggtgctgttg cggatgaagc ctgagggaca ctcctgcatg cactcatcgt 98760 cgtggataac gaagccatcc gagtcactgc tctcagcgtt ggggatgttg gcgcagaaat 98820 cgcgatccac acagcgccag ccctcgaacc tgtaggtgcc aggcgggcag gcaggcacac 98880 98940 acacgccttt gtagtagtag tgtctgcagg ccacgcaggt tgtgttgtcg tccggtgtgt ggcagctgcc caggcactcc gggtggcagc actcgttgtt ctcggtgcag gctcgcttcc 99000 99060 cgcacacact tgggcacact gtgaggacag agggagagag ggtggtaagg atgatgggct acacagcete ecctgggtea tecgetgeea ceaecagegt ggegtaeegg agactggeta 99120 gaaaagcaca cctcctctga aatctgcgta gatcttaccg tctgtgaatt ccacttgggt 99180 aaagacacaa cccaacccaa gtccattctc tcctttagac tcctggtttg ctatgggatg 99240 Page 61

		-				
agccattaac a	atttaacacc	catggactct	tcaaaatgca	gtggccacac	ccattaaaag	99300
ggagcccatg g	gtactggtga	acagagagaa	atacagacaa	tatgggcctc	taggactata	99360
caaggcactg 1	tgctcctcag	ctctccttct	gtatgagaat	tccattctaa	gaccccagtg	99420
gatgcctgaa (	ccacgcacag	aacactggcc	tgtgcacacc	cccttctccc	tcatgcatac	99480
aaagtgatga a	agagaggagg	cataacaagt	acggtggttt	gaaggagaaa	tgtcctacac	99540
aggttcatgg a	atgtgaacac	caggccggtg	gtggtggtct	gtttgggaag	gttacagagc	99600
ctttagcagg	gagctggagg	aagtcctttg	ctgggggtag	agtttgtttg	gggttttaca	99660
gcctggccca	cttctctatt	tcctgtgtgt	gggtggaatg	cgatcacttt	gtgtttcctg	99720
cctgacaaga	ctaaagccat	tccttccccc	ctcccccgg	ccaccacaag	gactctgtcc	99780
cctctaggac	tgtacaccaa	gataaacctc	tatctctggc	tccatttttc	tgtcaaggta	99840
ttttatcaca	gcaacaggaa	agttccaaat	aaaacaggga	actagtcaaa	acctctaggt	99900
tactgcagca	aatgttaacc	atacccttta	caaaagcact	gcgtgactgt	ggcctctctc	99960
ttctcaaact	ccagaaaaag	aaatccaggc	tacggaggga	ctactctttg	ccatgggcac	100020
agaagtaatt	atggtctcta	aagaggaaca	agctacaatc	gaagtgccca	gtgcttatag	100080
aaggtctttg	gtaatgcccg	catctgcaac	gtctcttcac	aacacaacct	tcagatcaca	100140
agcaagctgc	tggacggtac	aggatggtag	tacacagggt	ttctgtaccc	aggggccacc	100200
tgctataagc	cttgttaagt	taaaggccag	gtccagtaat	cacagatcta	aaatcacacc	100260
ctgaacaggt	actctgctat	gcacttctgt	aaatatgtca	tgatgaacac	acgcctatga	100320
tccttacttg	tgaacaacat	ataaaacaaa	caaacaaaca	aacaaacaaa	caaatctggc	100380
taacagtaca	tgtacccaat	tgggggaagg	gattgtttgg	aaatactaca	gaactacata	100440
aatatgtata	ttttaactgt	gatgtaccaa	agagtcaaga	ttccatgttt	tattaaaaaa	100500
aaaaaaaact	actctaaaac	caaaactaag	ccaaataagc	cccagtaacc	acaggttaac	100560
ataaagaaca	cacaagttca	tctgcaccca	aaacagccgc	tttgtcaacc	cttcatgacg	100620
tggtctttcc	cgggttcttc	ctgtgcacag	gtgtatgact	acacatacct	gaatgttaaa	100680
ccttggacta	cggagaaagc	actggataga	cttggagtgg	ataccaccat	acagcaatct	100740
cgctacgtct	caccgttaca	gctgtgcccc	agcatcaaac	gcgccctcca	tgcccacaca	100800
ttactgttcc	atgagtacgg	ccatctttgt	gggcacctct	gcacgccact	gggatcagtt	100860
ttcagaactg	actgcacgga	gtcagtatgt	gctctggagc	cttacaccag	tctgtctaca	100920
cagctctaag	tcacatccaa	gaattcctgt	gtcactgcco	: ttaaaaacag	ttaaatcago	100980
agcatgaccc	agtaaggaga	ccggagttct	cgtgacactg	, ccaaatcgac	: ataatcttgc	101040
					cctggttato	
					a aggcctccta	
gcctccactg	tggctagago	gtggctgct	tgtgtttgaa	a gttcgttca1	cccatgggct	101220

PCT - Sequence listing for submission.txt ataaagcaaa agttttacta gagcttcctg gaacactcct ttaaaaaatac agtgtgtgtc 101280 tccttttttc ttgctggctg aaacatagaa atgatgcaca gatattcacg cagccatctc 101340 agatggaaca tgaggcaaca tagtgagttc aacttggcct ctcaagatgg ctggtgtctc 101400 tagaccagtg gttctcagcc tgtgggtcgt gatcctcttg aggggtgaca tatcagacac 101460 catgggtatc agatacgtac attatgattc ataatagtac caaagttata attatgaagt 101520 agcaacaaaa taattttatg gttggggtca ccacaacata aggaactgta ttaaatagtc 101580 acagcatgaa gaaggctgaa accactgctc tagactaaca ctgcagctgc tgacctttga 101640 acttcttcag gtgaagagaa accaactttt atctatgcaa ctgaaccatc cacacagaag 101700 acctatcttc agagccacac acaagtgaag acggaaagcc ttctcagctg gtttatgacc 101760 ttcatttatt ataactagct tcaggctgtt tttggacacc cattctagct caggaacaag 101820 cagaagttaa ttatctctgg tcacaccaaa aaacaaacaa acaaacaaac aaaaaacata 101880 atatcagaat tcagacactg tctaccacag caattacctc aaagacagta aaatggagtt 102000 cactgattta acagcctacc atgtttttag cttcacacac taccactgat tctttttca 102060 ctcaaacaca tcaatatatg acacagttga agatgatagt ctgatgactt aattaaacat 102120 atgcactgca cgggttacat caaggtttgg ggtctaaatg agcactgaag ttatttgtgt 102180 taattttttt ttttttaaat ctgtcaatga cagaagtcaa cgatctgttg gcatttacgt 102240 acccacccag aatttactgg ataaacgctg cacctgtgtg ccaggcaact ggacatcctg 102300 aaagaccacg cacagggtgt tcctagtact gtgggttcct ggaagggtct tcagagacag 102420 tgagattggc actgaaaaag gaaggccgat ggggaggggc atcaggacca cccgtcacag 102480 aggtcctcag atgtaaatac aggctgagat gttgctggaa acaaaatgga ccagctcagg 102540 gaggtaccac aggcacaccg attgacggac agcaggaaat caccctgctt taggcaaggg 102600 ttaggttctc acactagaaa ggtcagcatg ctgtatagcg aaggcatgat aaccagagtg 102660 ggcagaaggg cagaagaaca gccagaggag aggaatctgc tactgattac actgtccatc 102720 tatggctcac acagatacat aaagttcaat gtaactcgct aaaggctccc tggtgcagct 102780 gtcccagcca tccgccaaca ccattgctct gtgattcgtt agctcgacgt tatcagcaga 102840 gattatcaat gaggactaga tgccaacttt ggagcccttt acttacttac ataggaaaga 102900 aaatgataca tcacaataga tgatgaagtc aaatagctac atagtagtca aagcccatac 102960 catataaaag cagggggaaa taaccttgta cactgtcttg aatcagttac cccccaaatg 103020 caaatgctac atctttccag gatgagaaag agaaatagaa atccttgaca aaggatttgc 103080 taaatttgag acatgttgag ccctgttcca ggcctgtgat gggaacttct tctcaactaa 103140 gaaccataaa gttaaaaaca ctgtctttac agatagaacg gttcttttaa ggcatatacc 103200 agatccatga gtcccttaac actcagtgat gccaactgtg aacaaatgcg catctgatat 103260 Page 63

PCT - Sequence listing for submission.txt

tctgtgggtg gaagaggaca aaaaaggggt atgcagagag ggagagagaa gatggaggaa 103320 ggccgacctg cttgctaggg gactgactct agagatctgt gtgtggctac agggaggaaa 103380 ggggtgtggc tctctctcca gcacagagga ttccaggagg aagcaggaga acgcagggct 103440 gggattagac agtcctggag ccagcttcag aagcctgctg taaattttgt ctcatctcga 103500 tgtatataaa tattattagt gttcaggact attaagggat, ttcttgaaaa gccccgggca 103560 gtgcgtctcg ccagcagatg gatggctgct ctccatgagt gccaaaactt aaaatttagt 103620 gcagtaacca aatttccaat tacagcacca tggggggaaa ggaggggacc tcccccgcca 103680 ctccagagga ggggcacaca ggcatggtta aagggcagtc caaccttaaa aagaggaaac 103740 ggaagctgtg aactagggca cgaaggaaag caaattgatt ttgcccatga gaccgttcta 103800 ttccttgcca ttaatcagcg aagacaataa aaacaaaacc ttattgaaac agtcagaaaa 103860 gctacaacat gtcctgtgtc agccatcaga aggacaggtc cagggtcagc gtgcatacgg 103920 aggccacacg ttttaaaact cctcttcatt tctttaagag aggacaaaca agcctcgcac 103980 atcagettgg teettgeatt tagtaagtte tttetaattt eeetttagee egtgattget 104040 tctgtcagtg aatcctttca tgatcgaaag ctccgagaag cgagcaagct aaagcttccg 104100 agtccaacgt gggaagaaga agtaacgaga ccgcagaaga gaaggatgga agcattagac 104160 aaggcagtgg aaaacactgg tgggaacaca gaggccagtg agggaagggg gaggtaacag 104220 gtgctctggg tgactgtcag agcccatggg gagtaaggtt ccgaacatcg tattcaactg 104280 tagtccaaac tctagaacag agttaaaaag ccatttgcta tcagtccgta agtctctctg 104340 gcaagaatct tcatattatt tgaaacacca cacctaggat ttccatgggc ttccccagtt 104400 cgaaactaag ccaacaagac ctgtcttcag gctctagtgg cctacctcca aaggaacctt 104460 tctcatttca ttaacccaac caagcactct atggaggagt gtgtggataa gccttgaaat 104520 agactcgtgg ctaatcttgg gagcatcctg cccagtactt aaacatgcag aagcctcctc 104580 cgtcctgccc ctcctcttct ttttctttcc tcctcctcct cctgtttctc ctgctcctgc 104640 tectectect getectgete etectectee tectgeteet cetecteetg etectectee 104700 tcctgctgct cctcctcctg ctgctcctcc tcctcctcct cctcctcaat ttggcccttt 104760 ccaaggcaag aggacatgta atactcaggg ccgtcacatg tatttgttta taaagattta 104820 tacattctac tttatgtgtg tgtgtatgta ccacttttac gtctggtacc cagaggttag 104880 aagaggatgt cagatttctg ggaaactgga gttacagatg attgtgaaac attatgtttg 104940 cgctgggaac ctaacctggg tcccctgtaa gagcaacacg tgtgaataac cactgagcca 105000 cctccccggt ttcctgataa tgtacttgta agactttcca gacacaacca tggtaccagg 105060 agcccaaggg cagagtatca ccaaggctgg ccatgccttc tgttttgtcc tcaggttaac 105120 cagcaaggag gatgctcatg atgctcccat gccttgctac ctttcaggaa aggcaaagat 105180 aggccaggga actcaggact cctcatagtt tggatggaag ttccagtttt caaagaatga 105240

PCT - Sequence listing for submission.txt gtatctctgt tggcaggaac tgtgcctgac tgaggaggag caggggacca atggcaagaa 105300 caaggagaaa aagcccagct gggggtctgt gctgtgtcca ccttacaagc atcacaatgc 105360 tttcagttta ttagtcttca atgtacccct ccactatctc tcttcacata cctttcccca 105420 ctccaatctc ctcatataaa ggtactacta tgacttcact gtacctctga aacaaaaatt 105480 acatgttgca atttgactat tgtcattatg gtgtggtggt aagactaact aaatctaacc 105540 aaaccaaatc taatctatgt tggaggtaag gcctttggga gagaattagg attgtatggt 105600 gtcactaggg tgggacatca ttgtggtagt agtgccttta tcttatatat agagagagac 105660 agagacagag acagacagag caagcaggca agctcagcaa gtcatgcctt ggccatgcca 105720 taatgcaata ggaatgccct ccttagagac tgacactaca tccttggact tctctgtctc 105780 cagaactatg aaaaagtatt ttctttataa actaaccagc atcaggtaag ataagtatac 105840 ctcataagga atagatggtg agtgttgctt cttggactca gtcagtcact gggttacatc 105900 ctagcaaaat ctgtggctca actcacaaag tcaaactaaa tagtgcttct cccccccgcc 105960 cccccccc agggggaggg atcgagggtg ggagagtcag agacagagta agaatgagga 106020 gaaaggagaa tgctttctcc aaaaggaaga caaggaccta aaacatactt atggtctttg 106080 caacgtcaaa aggagaactc tactgcctca ctactgagca agcatccaga gtttaaaaca 106140 gtgtctaagc atgtctgcct ggaagactgt agccactgca tagtctgtca cacagcaaag 106200 gcaacttcac gtggcaaaca gtgtcttaaa agcccaggcc gaaaaatcac attggtaaaa 106260 gtattctctg cctaatgcca aaaaccaaac caaaccacac cataccaaac caatccgaac 106320 caaacgaaag caatctcctt ttgtggcggg gcggtaggca gatccagagg agacgtcatt 106380 ttaagccaga atccaaagct atttcagttt ctgtttgaac agaaaggctg ttacagatgg 106440 agaacttcca cagagaaaag cggaccctga gcagaacact cctggagcac agcaagctgg 106500 acagagagag gacaggaccg cgtgcttttt tgacctgttg gcacgctagt catgagagct 106560 cctaactttt ccagcagctg atgctgtaag tcattttctc cttattgact ttcaaaggat 106620 tttcaactgc tctgggttag cttgcttcct aagaagagcc ctgaacagtg cacccgcact 106680 tgggcagttt cttgattctt ggggagtata taaagggcta taagtcacat attgttgctc 106740 ccctttggct ttgccctttg ctttccacac cttgaaagtt gcagggctgc tctgcaggca 106800 gcatggtcca gtcacagacg gccagagtca caggcaggtc cccatcttaa ttccaaatac 106860 atctgcaaaa cccctagaca gtcttccaag cagcccaagg gaagcccact gtttgcaggc 106920 ggtgcccctc aatgcggaga cagcactcat ttggatctgg tttcccaggt gaccttccgg 106980 cagcattcac tcctcagggc tccatgaagg tctggcacat gcggggcaag gctgctctct 107040 cccacatgct tgcaacccta ttctaacagc acaggatcat ttgaatcagt gtggaatatg 107100 ctgagactga aagatgtggt ctgccacggc tagggtaact tgctcagact cagatctcaa 107160 aagtaaggac atgcccacac tctgcaggct cattctgagc ctctaatcac tgagatctcc 107220 caggtcagcc tttccacaat agctgtctga gtctctctta tataaatcca atttatacca 107280 Page 65

PCT - Sequence listing for submission.txt

caaaggcaaa atacaaggct gcttattaat acggagttaa ctttcagtgt tatttcccat 107340 atgcctgatg acactttagg tgtgttactt atatgcatta tttaatcctc ctgataatca 107400 caaaqqqtaq gcatccttca cttagagatg gacaaactgg agacatcgga gagattaaag 107460 aactcatgca agaggatcag gctgctgtgc cgttgttggg tgtcacactc agagtcccca 107520 acagatgaca gcagcctctc cacacatctt cccatcgtgg tgtggacggc ttctgagcct 107580 ctctgctgtc tgaaaggcat gctgcagggg agttgcttgc atgctagttt tctttttaag 107640 catgcaacca taaggaagaa ataaaccaaa agccctacta cccttttcta ctctcttgag 107700 gtatatccct aaatctagag gacaaaacaa agtaacatac acaccgaaga gccccgcctc 107760 gtgcatacaa gtgatactag agaaataata tgtatcaact cagtgtcctc tattgagttg 107820 tagccaatgg aagtctcatg gacatttttc tgccacaaat ttaaaagact agatttttt 107880 ttttttcat gagacagggt ttctctgtat agccttggtt gttttggaac tcgatccaca 107940 gaccaggctg gccttgaact tagggatcca cctgcctcca ttttcagagt gttatgatta 108000 aaqatqtqqa ccaccctgcc tggccgccag gctggatctt gttggtatct ctaagagcca 108060 ctgcaaagtt gcacactaac agagaagctt ctcttctgaa agatgcacag tcaacatggc 108120 ttacctgata ggaaatgact gtgacatcag accaaccaga ccaacaagac ccaaaagact 108180 acaggeteet cagagteage teggaceaaa taagtegaet gaatgeagta ageatgetta 108240 ggttttcaaa tgccctgaga caatactctg agaggtgatc atagcatcct tccaggaacc 108300 ttgctaggtc acaactcatg cctcactcaa gagctgctcc ttcccaagct tgtaaaccca 108360 ctctaacagc acagaggcat tctctttagc aagccataca gttctgtaag atggaaactt 108420 tgtcgtggaa gaaaatctga gtcagggcca gttgagatgg ctcagtgggt agataaaaca 108480 gctatccttc tgatggcctg ttcgaccccc accccctca ccctggaagt cacatggagg 108540 agggacagaa tcaattccta ccaagtgttt tctgactgcc acatacatgc tgtggtgtag 108600 gtaggagtct cctccccaa taatgtttct aagttgggga acagttcagt gcgtcctcct 108660 tttgggagag cacagtttga aggctcggag aaaataaccg agtagcatcg cacagtccag 108720 gacagaaggt aagccacaga gttcagctgc tgaagcatct gggaacattt cattaatgag 108780 caaaagaaac aatcgcctac tgacaatgcc tgtgggatca ctgaggcctc gggaaccaag 108840 cagtgctggg cagagtactg agaaaacagg aaaacaaaca ctgcaaaagg ggtaacaaag 108900 aagcctgcgg agggaagtta taaatagcaa cattataact agaaagctgc gtggaaagag 108960 tgaggaccga ggtgcagctg acccaaagag ggagagcagg aaatttcaat aaatgacaaa 109020 ggccggcaga acagagaggg ctctgcccac ggtgggctaa gagtttcctt tcttcttcct 109080 gcacattttg taatatcagc tttacaaaca cacacacaca cacacacaca cacacactta 109140 aaaaagcaga aagtctggtg gttttcagtg tcttcgtaga gttgtgcaaa tactgccaca 109200 atcgacgtta gaatattttc atcatcccaa agcaaaaagc ccatacatag caaagcttcc 109260

PCT - Sequence listing for submission.txt cccagctctg gggaatgact aatcttactc gtctccactt ctccactgaa tcgcctgcca 109320 ggagcatttt acttagtgga atcaaacaaa gggtgttctc ctgtagccac tgtcttccat 109380 ttaaaacaat gctttcaata ttcacccttg gcatggtgtc tactagtcct tctggctttg 109440 ggctgtactg attctcactg tgggaaagcg agcctttcta ttaatgtgga gtgataacat 109500 cgtaggtatt gggagtagaa atgctagaaa cactgacaaa ctcggaaggg gtaaggatgt 109560 caaaggatgg tggatgctga ggtccaggca aggtgctgag aagggtctgt ttgcatccca 109620 gactctgtat ttttggctaa ctctatccac taacttgggc cattctttga tagacagggc 109680 tgtcacagtg ggcataatct gtagaggaat tgtcacctac agtgtggact gtgtctcccc 109740 tctgctcagc aagctacctg tgccacttat ggaaaaccaa gtgcacacac atgagcttga 109800 gctctgtaga aatgcctgac aaatggatgg ctgaagctgc aacactgaag ctctgctaag 109860 atggggagag agaaaaggaa gggcaggaga gagtcaatgg aaaagatggt gacgaagggt 109920 gcagctcaac cttagagtcc ttttaccagc actatattgt tctcacagac tgtcttaatt 109980 cccgtgtact tttaaatagt cgaaaacgcg attttcaacc tattttaaaa cccacataca 110040 aatttgaaaa actgcaggca gattttaaca caggggagaa aacaaacaaa gagagctggc 110100 atgggggtca ggacagacag ggccctcaag ctgatggggc atggtcagca ggggagggca 110160 gcttcatggc tgcttcaagg atggagaatc tctgtctcac aaaagtcaca cactttgtcc 110220 tcaagagttc tgaaaaaagg aaaagaagca agaagtccct gcagagggcc gactcccctg 110280 cagccgttct cagcaggctt gagcacataa agatcacttg tgactgcctg tcacagatgc 110340 tcaaatggac aggatgggga aaaaaaatac ccttcacaca cttaaaaatt actctaagtt 110400 attttaaatc tggaactgtt tgtatattcc ttataagttt atgaaactca cacggtcgct 110460 ccatgactaa ctgaagcgga attgagagag tagtctctat ttataacttc tctgcttgtg 110520 cgtgcgtcca gccctatttc cattctctgg tactgtacgc agagttatgt gaagccgtgt 110580 gggctctgaa atgctactta cttcctaaca aggcaggcct gtgttccata ggggcaaatc 110640 agtgggagac ggggtgaggg gttgcaatga ccaagtgaag gccaggctca gaggggaggt 110700 ctcaagcacc catcattgct caggcagatc ttttgctgtt ggttttgttt gtttgcttta 110760 ttttatttat ttatttaaa gacagagttg ctttgtaaac cctggctgtc ctgggacttc 110820 ctctgtagac caggctagcc tcaaattcac agagatccat ttgcctctct gcctaccgag 110880 tgtttatacc acctccaccc ggctagactg cacctctcta aacgggtgtt tgagcctgtt 110940 ttgggacaat cgcacacctg gtgatggctg agagatctgt tctgatggtg tgaattcatc 111000 aatacacaca ttcccaggtc agtgccttaa atctgtgtgc ccgctcatgt cacctcttcc 111060 acttgatttt agtggaattg tgtcaccaaa gggtgcaagg ctttaacagg tcatgcataa 111120 gcctctctcc atacacaaat gtttatgtga agataactga aatgactgac cagagtcacc 111180 catgggacaa ctagtactca gagcagagca catgaggcct aggattaagt tctgttacga 111240 aaagcaagac ggttcatgga gagagtaata aatgtgaaag atacacgcgc acatagacta 111300 Page 67

PCT - Sequence listing for submission.txt

cccatggaat tcggatggct acatgtacat ggacacgaat cccctattca cagctgctcc 111360 catcaactgt aagaacagct gctctaaggc tgcctagtca tagtttggaa gaaaaaaatc 111420 aaaaccaact cctggaatct tctctaaaac aatgctctgg tgactgtagt tgtctcgctt 111480 catgctgctc caagaggagg aactccccat gaaaaggagg aaaaggcagt ccacagtcca 111540 cgcttccttt ttgggaaaga tcagaagggg taacaggcac ctcacacctc aatcctgtga 111600 ctaattatga aggtggttta tttttactgc atagcctttt cttttccagt ttatatcacc 111660 tcttaatgtc tccagattca ttcctttcta gaatcttaaa cttcattaca gccatctctt 111720 atgtccatgt atgaaataaa ttaccactaa aaacatccct gagaaacatg tctaaggcaa 111780 ctcagtcact gtatgcacac agtgaagttt acaggaacta ggaggactgt gacatcatta 111840 tagccccgac ctgaacagga tcactgatgt gactgaacct ccaggatgca cagctgcgtt 111900 taaatcagtc gcagttcttg aagaagcacg cactttctaa acacagcacg gatatcaaca 111960 gctggtcaag tgaccttcag cctgctcctc tgaggcccct gcctctctgc tcaccacttc 112020 cttcatcctg ctgctctgct cctgtaactt ggctggaaac atgacttagg tattcccagg 112080 accatcctac tacatacttt tacttaccaa gtagcaatca ttaaaaaaaa aaaaaaagct 112140 cagctagacc tttaaattat ctaggagggt agaaaagcat tgtccctgat aattgtacat 112200 cctgaaaaat actatcacta gcataaatac atggaatatt cataatcagc ctatctcact 112260 gttaaaaagt acctagaaaa gagaccatgc aactgttgag ataccatttc tagaatctct 112320 ctctttttct gagtgtgcat gtgcgcacac acagacttct gttggctttc attgtacttt 112380 gcttgaattt tgtgagcaga gggggtggaa aaaggtacca acttggctaa aacgcatcgc 112440 aagtgttgat gccccatagt gccaatagga atccgagtat tctggaaatg atcacttctc 112500 agtttcaacc aggtttttc gttttgtttt taaaaatggt actgcccacc gttaaaaagt 112560 tcactgaagg cattcaaagt tcgagatgcc acgctctttt ttaaaaccat tttttaaaac 112620 gattaatagt tgagcactta ggtgggcagc ggtggcatgc acctacaatt gcagcacttg 112680 ggaggcagag gcaggtggat ctatgtgagc ttgaggccag cctagtctac agatcaagtt 112740 ccaggacaga ggtacataga gaaaaataaa caaacacaaa aataaaacca aaatcaaaac 112800 caccacaaca acaactacaa aattgggtcc agactgggag ccatcctagg cacagtgggt 112860 agaacgcacg ccagctgact gaacagttcg gatgaagatg ccaacagaga gaggcccctt 112920 ctgttttttc caattaatta ggaactgtat gtctgtaaat ttttatttgg tctttgaact 112980 attatctcct gatctcagat aatctggttt actctaaggt gctgtccaaa tcatcaagtg 113040 ttccttgatt gctcagacct atccattatc acccttggat gtaagagact gaagcaatga 113100 gaagcatcct ggacctctga agacgagggt gaacccaggg tatcctttca gacactgtgt 113160 acagggcacc tgcatagtcc tgtgatgtca cctgacccca cggggctggg agcagggaag 113220 gtcatacaga gggagggaga tacaggtagc tttctgcttc cttcccgttt gaacctttag 113280

PCT - Sequence listing for submission.txt cccaggtctc ccttcatcac ctccagacat gttctggaat accctctagg ctggttttct 113340 acggttcacg ggaattttca ttggaagctg aaggaattaa caggtagatt aactatctct 113400 ataaacctga accccagtaa gcagacagtg ccagcccgta aagcatagat gagtctggaa 113460 cttggaatgg tgttcaagaa tcactttatc cgtggtataa aaatggaagc attcagaaat 113520 gggaaagggc caaactgcac tccgcctcct acaacgggac ctgtgacccc acagaagttt 113580 ggcaatgtca aggacacgcg aagtttagtt gctacacaaa gggactggtg cctatacagc 113640 gatgcctaag atacaggacc atattttcca aatcaactta aatgtgcagg tgtgtgtgtg 113700 cacatgtagt gcacgtggaa gacaaaaggg caatgcagta tgctttccac tattgctctc 113760 tgcctggtct tgtgaagcag gggctctcac tgaagcagga gcttactgac tggccaagct 113820 ggtaaccagc aggccttttc tgtttcctaa ggccacttag tttttacacg gatgccgggg 113880 atctgaactc agcttctcac acttgcagaa ccatctctcc attcctccaa atcaactttt 113940 aagcagagaa gccttaaatg ctgcgaactc ccaaactatc agagtcttcc tcttctaaga 114000 aagtateece aggtttteea aattetggae teagtetgaa agegagggte tgaaaaagee 114060 agagtcatct cttccactcg ggggtgaggt ggaggtgggg gcaataagca ctgtagcaac 114120 ttccttgaca ttcatgtcaa aggagctgct gcctttcttc agaccccaga gtttcctcat 114180 ccagcaggag gaggcaggga ggtcagggtg cagaagccgt ggagcctgta tcctagtctg 114240 cagcgtatgt caaggtgtgc tttgtcccga tttagagaca gagcgagcgt tgaagtgaaa 114300 aagggttaag aggatggaac aaacagaaca tactttgcag gcaatgacag tgacccaggt 114360 aaaggcagaa gctgtgctca actccctgta atgggagcca gacatgcaac ttctgttatg 114420 caatgctttg tgaaaagggg aaggcttttg gtggtctcca ctctcccacg ggggcctctc 114480 tcccacggcc taggaacgca ggagaggga ggaatggcca ccacaagtct gggctgcatt 114540 cctctgttct gcttctccat ggggcctggg agcgagcacc tttgcaagag aaaactcccc 114600 aagagctact ggattctgga gcaaaggcaa ctcaggaact atgaacccag aggacggaca 114660 tcttcacttg gcagatggag aaagtgaagt tcaagcaatc taagcgagga aggttgtagt 114720 gctcgctcac tcactggagg ggggttgggg ggagcttgtt caagcttcca aggagtgaac 114780 acagggattg ggacaccaga aaagcagctt ttcttcatct ttgaaatcac aagccctttg 114840 aacacacgaa ccgcacacct tccttaaaga aatactgggg attttgaaat caatttaagc 114900 acctctaatt tccaaccctg aaacgtttta ctacgtgcat tctctaactg cactcgtctc 114960 tcaccttgta aacaagcaag atcggctgga tgagtgtccc ctaattacgg tttccttggt 115020 gcccgtctat ccgcattggc agcacctgaa ctttctcctg cactgtatct tcctaaattg 115080 acattctcag cccacactgg cacgctggcc tggtgccatt caacagcaca aatgacacat 115140 cccaagcctg atacttccgt cctcctgccc tctccacact gcgtgtccgt aatcctgccc 115200 tccacccact ccccaacct ttgaaatttc taaaccccag cagaggaagc cctgtagggc 115260 tcttaataag ctcagtcatg ctcgaaatat ccgttttacc cacagggtat tgtaggcagc 115320 Page 69

## PCT - Sequence listing for submission.txt

aattccgace agagcacatc tcggcacgag atcatggcct ccaaagccca gcgttcagaa 115380 ctcctaagag caccgctctc atgcagtccc actggaacac ttgggaactt caaacagttt 115440 gggggtggga aaaaaacatc ctctctgata cttccacctt ccacctacac tgtgggttag 115500 gaaactcctt cctgttgctg tggccacgga gggtacatat cgcaactctc ctggctctag 115560 tgtttgtgaa acccacagga actctgccac cacctacaca gaaagtccca tgccagagac 115620 aacgacgcat aaacatttta tgttaagtta gccacatgct aagaaaatat catcttgatc 115680 aggtattttt ctagttctgt ctcacgttca agtctcaagg cccacgtgga ggggagcacg 115740 gaagtacact ggttgcatat cttctgcccc actggaagat gcttgggatt tctgaagaaa 115800 ccacctgtaa atcagtctat cccttaggta atcgagaaag agagtccatg aattgtgttt 115860 cattgatgtg agtcctatag gtgcttcccc ttggacaagg ataggtacca agaacaccat 115920 cctgggctgg ggagatggct cagtaggtaa agtgcctggt gttccacaaa catagggcct 115980 gcgtttggtt tcctagcagc caaataaagc acaggacttg gcaacaggac cctgggatct 116040 ccctggctag acgccctcgt tgaaatagca acctctgggt tcagggagat gttgtagtaa 116100 agataatagt gataatcaag gtggagatgg ctagaggatg atggtcgaca cccaccgtca 116160 actgtggcct tcacctgtgc acatgcacac acaggcagca agtgcacccc atatactaca 116220 cacacaggca gaaagtgcac cccatatact acacatacag gcagaaagcg caccccatat 116280 actacacaca taggcagcaa gtgcacccca tatactacac acacaggcag caagcgcacc 116340 ccatatacta cacacagg cagcaagcac accccatata ctacacacat aggcagcaag 116400 cgcacccaca tatacatata cacagttttt gaaaaaaaaa aaaaagctca aatcaattta 116460 taaaacatta agttttaagt tggcccttaa ctcactaata ttatttgaga ggatcatcag 116520 tgaaattaga aacagaaaga atttaattgg aacctgttga tgtgtttcag gttattcaat 116580 aacaaaaaca atctgccagc ccggtaacat ggtcatttgc tttgaatggg attgcttcat 116640 tctgtggatc cacattccct gaggtgggcc ctgaatggct aggctcatct tctgggaaga 116700 gggacacaat ggcacggggt agcattcctc tgcacattaa tcatgccaaa tatcattaaa 116760 aaacaaaaca aaacaaaaaa ccaaaaccta ccagcccgga agccatggtg gcagcagtta 116820 aagcaacaac ttaagaacag acgaggccca tctgcatgcc gctgtggcca catttgaaaa 116880 ggcccaagga atgtctgtct gtctgtcttc tctgcctaca gttttcaaaa ttggtttcgg 116940 ggagagtgag gttcatgctc tgtgttagaa acatattacc gagcagctgt ctggttacag 117000 aagaacacgg gcttgggaga agttcacagt ccagccctgt cagctgctgt aagtcaaagg 117060 gactctgcct cctcagagtt ccaccggagg cagatgacag acaccacccc gcactgttag 117120 cccatgaaca cacgcagcaa ggcacacagc gacagcaagt gtctcctgca catcggcagt 117180 gctctgtcaa tatcagctgc tgtctccacg taagtctctg gactggattc tcaccttggc 117240 tttgccaact atgtaacagt gcaactaact ggtgcacagg tatagaagag atgaggaggc 117300

PCT - Sequence listing for submission.txt tcctaggacc ttccgccacg gcacgcttgg aaaaggaacg tgacgaagag cttctagtta 117360 gttcccttca tgtgctgaag agctgcagat ctggtttcat ggaaggatgg ttagatgaat 117420 aagaaagaaa aagagaacta aagaatgttt tcaattttaa aaattatgtg aaattgtgtg 117480 tgtgtgcgtg tgtgtgtgt tgtgtgtatg catgtgtgca caggccaagg tgtacacatg 117540 catggtatac cagtgaaagg cagagggtaa gtgtgggagt cactttctct agcctttacc 117660 tgctaagcct cttactggcc cgtaagggca ggaatctgaa gtacttaaac ctcacttctg 117720 atcaaataaa actttataa actttaaaag accgttttct taatttcagt actcttctca 117780 gaccettetg tectagagta acctetgtgt gatecacaat agacetggge teacceagaa 117840 ctccctgaag gttcaatggt gatggtggtt tggttttgtg cagttctagg aatgtacaga 117900 gacacaggct gaccactgag gtcatgtggg gattaacact tcatcaggta caggagctgt 117960 agctcagggg cagtgtgctt gcctagcatg cttgcagccc tggttccaac ccccaggaac 118020 gctaaaacag agaaaacacg taaataacat gtctgccagg tagcaagcta ttccaagaca 118080 aggaaggaga cttctgtgtt tcgaaaaatc tgttttgaaa cacaaagaga gactgggact 118140 gtggctcagt tagtgtagtg cttatctcta tccgagaagt cctgggttca attcccagca 118200 ccgtttaaat ggggcatggt aatagaggcc tctaatccca gtccctggag atagtggcag 118260 ggggactcca agttcaaagt tactcctggc tatatagtga agaatgcaag gcagactaga 118320 ctgggctaca tgagactctg ttttaaaaag ggaggaagaa tccttccaat acataacttt 118380 actcaacttt gcttcagctt acattataaa cgctggtgtt agcatagata cagaagctct 118440 aatattaatt acgggattca gacagaggta gttagagaac tgtataatgg taacacccaa 118560 aactgggttg agtaccccaa atactcaaaa gaaacagaca atgctaacct gggagattag 118620 aaatgattct gcaactagtt ccctgctgca tgtgcagctg gaggccccca caagttggag 118680 gcttggtggg agactgagaa agcatttgct attcgttttc taggtccaag gcatttcttc 118740 caggatccat gggctggact agatggagca agtgcaggct taagaagcac aggtactgtc 118800 cacacactcc tgatcatcaa gatggggagg gtatccagct tgttggctgg tcactagaac 118860 atccagttct ccttccattt gtaccactac tatctaggac tcactgatct tcagtcacag 118920 gaaaaggtca tctatagcca gtggccagag atagcctttt atgcttgctg cacgacacag 118980 tcagggcagt attccaggaa tgcacagaca gcctgctcag cttctctcac ttcccctctc 119040 atagcccaga tcgaggaaga tggattcacc catcctgtca acaaagactg ccagaatctc 119100 ctgtagttgc aggtatacaa ttgtgagttg ctatttaggt tatggaaggg ctgtggcatg 119160 ccaacagata atgtgtggct acatggaggt aggcatggga aggggcaaat acacacaca 119220 acatatgcac acacacaaac ggaacacata catagacacg cacacacaca taaacacaaa 119280 Page 71

PCT - Sequence listing for submission.txt

tgctcacata tacacacaca tgcatgtaca cacactcatg catacacaaa cacacataaa 119400 cacacacata tataccctac ttctgtacat gtgtagtcct gactcaggac cttgggacct 119460 gctgctcatt cagcatatgc cgctttctgt tctccacaga catcctgcag atgtcccagt 119520 gacctgcctg ccgcctgcct tccctgtctt tgaggtggtg acaactcctg ccaccccaac 119580 attttatgtc acagcttcct cttcagctga cttgaaagct ttattttgtt caaggtctac 119640 cgagcaacca agaaagaaga gctagtgttt cacgggtaca gggtggagtg ttctggggat 119700 aggtcagtca tcgtttccct tttagggaga cttggatcgg tgttaatgaa ctactcacag 119760 gaactggcca gaatcagagc ccttgaattt tatgcactgg tccagggagg tcctgagaga 119820 gtggatgcag agtgcactgc ctttttctg cctttgcttg gaatcccaga ggagccagat 119880 tccaggaagg aagtggggca gggaggcagc agggtataac gaacaaacag aaaaacaaaa 119940 caacaacaac aacaacaaca accaccctca aacctggtct ggctcagcgg gtaagagcac 120000 tgactgcttt tctgaaagcc ccaagttcaa atcccagcaa ccacatggtg gcttacaacc 120060 acccataatg agatccgatg ccctcttctg gtgcttctga agtcagctac agtgtactca 120120 gtataataat aaataagtct ctgggccaga gcaagcagag ttcctaaaat tcaattccca 120180 acaaccacat gaaggttcac aaccatcagt aaatccatcc atccatccat ccatccatcc 120240 aggcatggcc acagaaacaa tgtgtgccta ttgctattag taacaaggta ccttcttcca 120360 tttgggctgt gtgcggcttc atggtagttt accctgtgct gcctgtgttc atttccacag 120420 ggaccccagg atggcaggaa gacctgcagc cttctcacct tcagaaccag agccaagaac 120480 acagagcaaa tgtcatgaat ggtcagagtc acacagcctg caggaggcaa agctggaatt 120540 ctaagtggct gagccttgag gtctcaaagt ttgtgaccaa tacactgtgg tggacctgcc 120600 ccggttccag agtcactgga aatattctca tagcaagcag gaagatctca gggacagcag 120660 acgtagttct aaatgggcat gtcttgctag aaggcacagc tgatgtgcct tttccagtaa 120720 gcattacaag aagcccattt ccatggttga aaaatgcaaa ggattattct gagccatccc 120780 gatgataaag aggacaacaa tttgccttta aaaaaaaaat ggaagctggg cacagtagca 120840 ctcttctgta gtctcagaac ttaagatggc tgaggaagag gaggacttgg gaagaggagt 120900 tcaaaggctg gcaggggaaa acacatcaag accttgtttc agatccacaa cgtaagcaaa 120960 ccagaaggtg gtggcaaacc tggcggcgac gcttaggaca tctaaatact caattatttc 121020 tacttcaaac agtgtaattc gtacaaactg gtagagcaca gaagcagaag aacattaaac 121080 acaggattta ataatggata tgtgcacaca catatacact gttgaagagc ttgtcgtctg 121140 aaagtttcta tgaattaaat atttgttcat taactactcg agttcacttg caaggcatgc 121200 caggcgccaa gggagagcac agaagtgcac aaggccttcc acacaaagac caggaaagga 121260 gatgtgcaca tagataatga gtaaggcaca gacttatgtc ataaagatgc gtatcaggaa 121320

PCT - Sequence listing for submission.txt gccaagagca ctgccagcca agaccatggc gtggaaaggc atgtgtaaag caggtgctcc 121380 cggcagggtc catgtatgca tgagaatctg ctggagtgat ggtgggggtg ggccccttag 121440 atccatgcat ttcaagggaa aactatcaat tatcatcttt atttatttat tttatgcatg 121500 tgagtacact gtcactcttc agacacacta gaagggggca tcagattccc actacaaatg 121560 gctgtgagcc accatgtggt tgctgggaat tgaactcagg acctctggaa gagcagtcag 121620 tgcttttaac cactgagcca tctctccagc ctaattatca tctttactga taactaaaat 121680 gccttaaaag tttaacttag taatactctg tttaaaaggt atataactaa acacagccaa 121740 tctgtttaaa acaacacagt ttcctgagtt gactagaaga tgctagtttt tcattctgtt 121800 tctcctggta caagaagatt tcaaactatc tacaatccct catttaaatt taaaaaccaa 121860 ccaaccaacc aaccaaccaa cctccattgt gagaggtgcc atgccactgg tacctgcctc 121920 tgcctaacag tgtggaaggc tgcacaggca gtggagggaa aaaaccccca aacctctgtc 122040 gtttgttaaa acaaacgagc attttcacat tcactcatac tccctgaccc catagatcct 122100 gtgaattcta aaaaggacca tgcttgatga gaatgttttt taaacattaa cgcctacaag 122160 gtggagagcc agaagaaggg agccaagagt ggatggcgac cctcttcctc tcatgcttag 122220 caatttctgg tttcactcct atgcttctga gcaccccaac aggaaggctt cacagctcct 122280 gaaggtctga gctagaccag ggtacacatg aatatgctga ttatgtggtg ctcatgcaag 122340 gagaccccta aaagatgact tccccaccta agtccgaacc gccatgactc tgagataatt 122400 tacccaaagt tacatttctg tttcccaaag tattaacaag agtgtttggc tcttttaaaa 122460 agaagcttag tctttcaggg ctttttttt ttcccttttc ttttttcatt ttcaacaaat 122520 tgcttctatc gtctgagatc tccattacgg aactgtttgt attgagtttt agtgaaggaa 122580 gaaaaaaaaa aaaaaaagaa aacagagcgg ctgggaagat tcaagtgtgc tggagactta 122640 acattaggat cgggcacacc ccaggcttca gggttaagtt aaggagggtg cttgtgtcca 122700 gtgtgagagg tggggatggg gatagaggaa gcttcctcgg aagacttgac cactcccct 122760 cttttgtgaa gcctggaccc ctgtcacagc gagtaccaga gtacagcact cacccatgag 122820 cctcaattcc atgtgagcct attctttact ccacgttagt ctgcctcttt tgcaagcaca 122880 ctctgcaact tttcatttta aactgtgtgg tgtgctaacg agagtcagca gctctctgag 122940 tgacctaggc aagttctttc ttccatgagc tgcctccagc aacagagaaa gggggcaata 123000 ctgttgcagg gtcacggcag ttgggaacac ttttcctata gttccagaat tactggtctc 123060 ctacccaaac ctcagatcat cattaagaca tgctaatgtg tagcgagaca ggttggaagg 123120 atctttttct atataaaata ctgctgactg gggcgtggaa cccctgtcct attgggtgct 123180 gtggccatgc aaaaagaggg tcttccaaaa atttaggatt aagagggcat ggtgggagag 123240 gaacaacaaa ctttggaagc cttctcaatg tactgtagaa ttaaaagcca accaaggcaa 123300 ggaaggtgcc ttccaaccta gaaatccagc caccctctgc aacgagccca ggcctgctgg 123360 Page 73

## PCT - Sequence listing for submission.txt

agaccacgtg aggtggtagt gggtatgcct ggaacctaac ataccacttc tagtaccgcc 123420 cagctggcac ccaatcagga gcggcacagc attctctaag cccaggttgg cacctgcaat 123480 catcttaagc atacaatggc attgatttcc acttagggtg tagaaataac actcagaaat 123540 tttacctatc tctgctgttt tgctgccaaa tttcaaatac tctccaagaa acgcaaacac 123600 aacagaacac ggaggatgtg acacacaaat tctgcacaat ctcactgcca atacctcgat 123660 gttatactca gtgtattaaa tggaatcaga atcctgagtc ccactgtcaa acttcctcct 123720 cgtctagtcg gtatgtgtga ctgacagctg atgtcactga atgcttgatg tctgaaatgc 123780 ctaggattcc tttttctccc cccatccaaa tataacagct ccatttcata ctccctagaa 123840 tttcatttgt gactggttag cacactatca gtgagggaac acgggggctg caggaagctc 123900 accgtcctta cagatttctg ggagggagct caagagtaag taagtgtgta agccttcata 123960 gctctaccaa acacatgcat aaaacctgat taaacacaga ggaagaacat aaatattctc 124020 agtcttctaa ggggcagatg aagtctgggt aagaaggact aaagaaaaag catagagtaa 124080 aattcgctcc cgctttttaa taactcttta agataaggag agttgtttaa tgttttcaaa 124140 ataggcagag agagagagag cgagctagag agagaaagta tgtggtatag tttatgtgtg 124200 tgtgtgtgtg tgtgtagcac tgtgacagag tgtgtgcttg gcatgtgaaa tcccctggtt 124320 tcaatccttc cccttcagaa tgtttccttt ggaacaaacc aatacatctg gtgacgctga 124380 cctttagtgc ccctcctcca ctcaccctgt tttctacagc aaaagtatct acaaaaagga 124440 agccgtgcct caggaagtct tcaccaaagc ttgaagagca tggagagaag aagtaaggtt 124500 ccatcagatg ccttgtgttg aggtaagtcc tccctcccaa tcaacccaca atgaatattc 124560 tctgatgtca gcccctctct ctgagcatcc tgtctctgag accttggaag taagacttct 124620 gtgtctggga ccaaaactac tggggctatt ttggcagctg agccctctgc ctcctctgca 124680 gggaaaaaca gtaggaacat ttcaaataac attcatattt gagatatttt ctggctctgc 124740 gtatttttct acttcatagc acgtgtaatt gtcctccctg ataaaagtgg acctagcact 124800 gctattttaa aagttttgtg ttctacactt taaaaggata cacaaagtcc tagcaggaga 124860 acgtcaatta ccaagtacaa aaacaaaaca aaacaaaaat aggaaatcac catttggcca 124920 atgccacagc aatgggtgtt gaatgaggag gggaagaaat aatgaacagt gtgtttagag 124980 agtcccgaga tctgtctcaa agtacttctt aattagagat aaaaataaag atgttaagtg 125040 acgagaggac cttgcagaga cagcattaac caagtgtcac aattacctaa gcatggggca 125100 tcaggtgccc tggcaggctg acgtactgac tcttcacagc aggaaagagc acaggaggct 125160 gtgtgtgggg ctgcaaggaa tgacctccca tgaagtacct ggatcgagct actgaagtgt 125220 gggaaaagtg tcccggaatc ggagaaatca aggaggacag gaatcagagc tgggtgggca 125280 ccgctcctgg atcaggaacc acaaatggca caagagaggt caaagggcac tgggaagaag 125340

PCT - Sequence listing for submission.txt gggcagatgg tggcagtaca gtgcaggtgc taccttcatg gttcggacag cttcatcggg 125400 gttttgtaag atgctaatta gaagatgtca gacacctccc acccccacgt gtgcaaaact 125460 gaagcagaaa tatttcatat aaaacaaagt gtttttttt taagttccta aggtaaataa 125520 aagcaactta gtgacatatg gaacacaatg tccccgacag tttgacaata aggcaacact 125580 cttccttcgg gaggagagaa atctctactt tgcgtaggga cacatcaagg atatgcttct 125640 ttggaaggtc ttcaggctgg cagagctggt caccaatggg gatggtgtgg gggcgtttac 125700 gttctcacaa ttccccatct atctcatgtt accctccagt gcaacggaag tggagggtac 125760 actgagtgtt catgaagaga aagccgttaa cgagatgctc aacgagaata taaccatctg 125820 tcgcacttgt cccgcatgtc ccatgccctt ttcctaggct gcaagcacgc aagtggtaca 125880 cagatacaca cccaggcaaa acatccatac aaactaaaca cacacacaca cacccttttt 125940 gggtcctttg gagtccttgt ttatgggagc agacattgtt ctgtcttctg tcacagatag 126000 catcctctga gcttggaaag tttaacatga gattgatccc actctttcca agggggagag 126060 ggagactaat gtgtaagcag acagctccca gtatcacaag ccttagtttc ctcatctatc 126120 actatgtggt ggtagtgagg gcagtaaaaa gaccttgtca agctttgact agaacaacct 126180 gagattette attetgggag tageettaaa tgtaactata tteaetggea aagaagaaca 126240 aactaaggcc ccaggtgaat gtaagaaggc taccattttt acttcggtga tgctgagtgt 126300 taaggcgtgt atagcacaac agaggagtac tccaccgcaa agggatgcac tgtctctttg 126360 gagtcgaggt gccccctcca ggtaatgaga cagaaaggag tggatacagc tggtccaggt 126420 tcttggctgg ctccgagagc tatgctaagt cctctgaatc aatggtatga cacaagtttg 126480 ttctctgttg agctggtgtc ttacttcatc accagtgctc atctctaact cccgagctca 126540 agaaatcctt ctgcaggatt ggagagatgg ctcagcggat aagagcactg actgctctcc 126600 cacaggtcct gagttgaaat ggctcacaaa ccatccctaa tgagatccga tgccctcttc 126660 tggggtgtct gaagacagct acatgtactt acatataata aataaataca tctttgggtt 126720 ggagcgaacg gggctgggga gagagacgaa aaagtgtctg aagatagcta tagtgtactt 126780 atatagaaat aaataaatta aaaaaaaaga aacccttctg cacagccttc tgaatagctg 126840 gggtttcagg cttgagcccc ctttagagac aggcagcaga gacacaaagg cctgcccaac 126900 atgtgtagga ttagatagcc tgggtatggc tgaagggaac aggtactcag gttggcccag 126960 gccaggagcc agactctagt atattatgca aggttgcctc ctaaattata atgcacttca 127020 tttgcagaga gtccaacact agactcatgg tgtctggtag cccagagggt aacaggctgt 127080 gttcttcaca gggaacatct gaggacagag acggaccaag agggctcttg acggtggctg 127140 gtggtaagga ctaggagcgc ttacggcgag ctgcttggga gaagcctttt caggtggtta 127200 tctgagagaa ggcacaggaa gtcatgaaat taggacctga ggacttgtcc aggataggcg 127260 cagtagtgag aactgcatcc ttgtgaagat gggtttgacc tctgctggag gctacaatgc 127320 agctaaatgt gtctttatct taatgactcc agaaacgcca tgctgtgaaa gaagcaggta 127380 Page 75

# PCT - Sequence listing for submission.txt

ggtagaggga ggtcaggaga gcaaaccaac ctcacgtgaa gggtaactca cagacttgtc 127440 gttcactttc cagaacccaa ccctcaaaag aacatacttc tagggtgtag ctgggaacca 127500 ggaagcagcc agctctgagc tgctgcttgc ttgctctctc acacagtggt aacaagcaat 127560 gctcatctct tttcaaagca ctccaagcaa ataaacacct gcagaggagc tgatggagac 127620 agacttctct tactggggtg agtctattaa acagaaaagg aggcataaaa atgataaacc 127680 cagaccgtca gaacacagtg agtgcaagaa actgtcagca gagagcgaac tgcttccttc 127740 tcacgccgga gggcactgct ggattaagca taatacaagt tatgtatgct cgctgatgtt 127800 cctgagcggg taagaaataa ccagtgttca ctagagtaaa aagtgcagcg gttctgaatg 127860 catgctggaa agatctccag caagggacag tgcaggaaaa cgggagcaga agtctcagcc 127920 ctcggtctgt gtatcacctg gtcacgcttt ctcactgagg gatattggtc cccgggcatg 127980 agaggagagg ttcctgctac ctagtgactt tctcaagact gacttaccac taacctgtct 128040 cctatagtgt caggagcttg agtctgaaac agtcttcact aaatttttgg ctgtaactga 128100 aactggacta agtaattaaa aaggtttcaa tatttaagct cacatttaag ttgggaatgg 128160 agggatggtt tgatagtgaa gagcactggc tgctcttcca gaggacccag gctcaattcc 128220 tatcacacat ggaggcttag aagcatcttc ttcaggagaa gacctacagg ggaactaata 128280 tccttttcta gtgcacacat ttaaaactga ggcttagttt aaaccctgtt ttaccagggg 128340 caggggtgtc tgtgcacaag aaagacagac agagtttagt tttagttcta gacttctatt 128400 tgctcaccag gaaaataaca ttggtagact ttaccaaaat ctgcagcaaa aactaaatga 128460 taaatgtact ctcaaaacag ggctcaatat cccacaggtg atcagggtca acttttccag 128520 ggaccctggt gtcagtgggt tttatacttg gaatgagaac acagtaaagc tgggactgcc 128580 aatattcctg ctaggactct ttattttctt tatggcttcc cctagcttat ttagaagaca 128640 ggcttctgtc cctcagggac tggacttctc aagagcagaa cactgctgta ggaaacagtg 128700 tcttccaaga gtcaagggaa ggaggaatgc caccactgag aggagatggc ttgctttcct 128760 ccctcaagaa aagagtgagc aaggctccat ccacggcgtg ttccaacacc ttcccacata 128820 gctggaccca gatgtcatag gggacttgca gaaaggaagt ttcaacatca gctagccttg 128880 gcagatgctc ccaagtcgtt caaaaataaa actcgggcga tgacggtaaa gatgggatga 128940 cggcttaaga tggagcaaga ggctttcccc gtggcgggcc tcagcttagt gctatgcccg 129000 cttgccgtct tgttcaggaa caaaccgggg cccagatgag aaacgcgctc gcgttgacca 129060 tccagaaagg cagagtgtgt gcttctgaag gcagtgttct ccagcctttc taccttccat 129120 taaatggttg agtctgtcct tgtgtggatt gatgttattt ctaaagcaca caattcattt 129180 caagagggga gaggcaggat taagctggaa atagtttttt ttctattgag aaaaaattaa 129240 gtgtaagtgg aaacgttttc atgaaaatgt ttttatatct caacgtttcc tgcgagcact 129300 ctgatcccaa tatatcacag gactgagctg gatgagggag aatgaaggca aaatgaattt 129360

PCT - Sequence listing for submission.txt aaataaaatt gaaactgacc ggctaggctt tattctccaa atctcatgaa atagcaaagc 129420 aaaaaaacaa gaagcaactc aacgctttca gctcaaatga gtttcaattt tatttcaaaa 129540 tgttttaaaa tctagtttat tttcatagcc acaaaagctt ttgaatacct atgaatcaaa 129600 agccatttgg cagaaccatg gagcttgtcc tagttgcttt ctctcaaact cttccctggg 129660 cctgttaacc ccttgttagt cagtcacgca cagcaggtca ctctcagtac ccagttctta 129720 ggggcactct acagccttag tgtgtatgag caggcagagg ctctaggctg gacggcacat 129780 gaaaatgata tatacagact ttaactacta attactttag acaaagaaca aacagaaaac 129900 aaaaaacaaa aacaaccccc tccccaaacc caaaccaaaa aaaccactaa aaaacaaaac 129960 aaaaaaaccc caatccacat cctttagaga ttattttgtt aatctgcatc ttgatctgtg 130020 ctgctcaggg gccacaggag gcctctgaaa cttgaaacag ttaagattaa 130080 gtaaaaagtg caacgaagag agctcaccac atcctaaatg tttctcaact actcaactcc 130140 cggctaccac acgcagggca gacacagggg atctgtcgag gcacaagact acagagtaac 130200 agtgcaggtc agacagaaga gcaggggtgt ggtctcagtc cagctctcac atagctcatg 130260 ctggcctcaa tttcgccatg tctctgaaga tggccttgaa ctgatcttcc ggctcccttt 130320 gggactgcca ggtgtgtgtt actctacaca ggttacgtaa ttgtcaggcc tttgtgtttg 130380 tgtgcatttc cctaagcaac ttcatgtaca aagctaagtt gggtatgcat tctctcccca 130440 ggcctggccc cttactctct accgtaaaat gcttcttccc taacaacccg acttgagtgg 130500 ggtccctacg tacagagaaa ggagatattt acagaagaaa gggcaaatga ctgcttttac 130560 agggaaagag catcccaggt caacacacgt accagattgt agagagggca ggtgtctcca 130620 tccccgtgcc tctctatttc ctttccaaca ctcagccctg tgtgagcaga gagtaaggcc 130680 cctctttgat gctgcacccc cctattataa gcacaatgct tgtaaccaaa cagatggttg 130740 gatgtttggg aaatgactga atgaaacaaa agaagaatgg tattctgtta aacaacagcc 130800 aacatccctc tagagcctgg acacacgtct ttatagagcc tggatacaag tctttatatt 130860 ggatagcaac ctctttactt tcaaatgcaa tctcagagca acccagaaga ctgattcagg 130920 tagtatacca cagctcagtc tcttccatgc tcaacaatgg ctccttccaa atggcattag 130980 cgttgtctac atatctgtac agtcagagct aatgtctatc tgttcgtctt taaatggccc 131040 agagetttte actttecata tactatttea ectaceette acetggatat tgtetataea 131100 ataaagagga ggaaaccaag gcttgggcga aactgacttg ccagatcaca tagagttata 131160 ggtatataaa tggaaaagct ctggtaaaga ttacagacta tgctgattct attagctggc 131220 tgtaggacag ctgaatggat ctctttcaag gaagggcatg atttgtaagc atcccacacg 131280 tcagtgctga gtaaggctcc taagtcctgc tggcttgctg ccagccagta gaccccttcc 131340 agggtgaggg aactgggcag agctcagcac aacccagctc acctaactgt ggctgtcaga 131400 Page 77

PCT - Sequence listing for submission.txt

atcattggat cctgcccatc atacatccac tctgtggcca tatcccgcag cttcacaagc 131460 ttcatcaggg tcgggcctgt gtctgcaaaa agaccagctt gagaagacca ggaggtgtat 131520 atcaagtacc actcgttcat tcgttcgttc attcactagt cagaacttca aaccaataac 131580 cccagaagta aagacaaaaa ctccctctgc cctctggtgg cttgaacttc cctcttggac 131640 ccaattccca caggttaggg tttccagaag ctttcaaaaa aaaatcactg atgaaacact 131700 agctctttag cttagcgtat tatacaaaag gctgatttcc gatttatcaa agggttacca 131760 aataggaagt ataaaaaccg tatgatcctt acagggaatg gtcaaagagc agtgatcaag 131820 tccctgattt acataattct cagccattct tttggcagac ctctacagcc actaacattt 131880 ccatctacgg atgataaaaa gataactctt cccccttcct gggtgcctgt caggtataaa 131940 cttgaagccg ggcacagtta atcctcacaa ctccccaagg aagaggtatt accatgtttg 132000 ctccagatta agaaagaagg gtcaggcctg aattccaggc atcagaattc tactgagagg 132060 gaagagagac agacagacag ctttcactct ggcctagagt gcagagaaaa ctactacttt 132120 ctgtgggaag aaaagtcagt caaccacagg aatcacagaa ggatccatca caagaggacg 132180 ccactgtccc ttaagcagag acaggactga gaagaacaaa ggtactactg ggacagaata 132240 tggagaggtc agcttgagga agtgctctag caaatggcat caaggaggcc atttccccaa 132300 ctggagagag acctcagatc ctcaccacag gagccaggta gcactgtggt acgcacacat 132360 accatgtgtg tactgatgtg gtgggagaca caggcagagg tggcagggtg aaatcaggtc 132420 aagaagaact gagagccagg ccggggccac tgctctgccc tgcttatgaa agccagggga 132480 ttaagtcaag acttcactcg tgattcaaaa agttatctga agacatggcg ggaagtacag 132540 ctaggtctca ccacccctcc ccctccccc cagctctgca tgctcaactg aggacgtgcc 132600 acttggcacg ctggcactct cctacaggaa aacatacttt ggctattcag acgtgacttc 132660 ctggcactcg gaagctgttg gcatggaaaa attaacaggc tgacttggcc agggaggaac 132720 ggttaacaca aatcaccagg aaaagatgag ccctgagcaa gcgggaggtt tgagggaagg 132780 gtcacggaaa aaagaagggg taagacacat ttgtcaggag tcccaggctg gtaccaagcc 132840 cactgcatga caaaggtcat tgagccctca cagccataca cagacatcac ggctttcctt 132900 tcaggcagtg gacaaggagg ctaacggagg tgaacttact tggcctggat gaggcagcta 132960 ataagggaca ggagctggta cacacatcat cacaacattc ttcattacgg tctctttctg 133020 ccttcaaccc cttgcccagt ttgtaacttc ataaggtggg gtaatgatgc caggaacttt 133080 gtagccctga ggcagaactc tgccccagct gtggccttcg taacctcccc ttactacaag 133140 cgacacagcc acctccactc aaatcctgac gacagctcag tatataacgg tagcgtgtta 133200 catactaact tggtcatttt ggggaaagct gcttgtgtgt gtaaaggggg gggggtggtt 133260 tggggcttgg gatcaaacaa atgagtaagt aggaaaaaag accaaccatc cactgagatc 133320 ctaaccaggc tttcataact taagactgga gtcttccaca aactcacaca ggtagccata 133380

PCT - Sequence listing for submission.txt gaagctactc ctggaaatcc aatcctggcc agaacatgct agggccaccc acattcctac 133440 ctgcagcaac cttcctttct ccctcagcat caaccctaag atcctccagg gctctgtagc 133500 tcagtaactt tgcagggtgt taagtctaga ggagcccaga ggtccgtggc ctcccatgtg 133560 ggggttacaa ttcctacaac cttaaatcct gtaaagcgtg cccacaaggt ccttcagctt 133620 ctcgccagaa cttccaaacc ttgcctttac acttaacaaa gcttcctact aaatatctac 133680 accaaatttc cgtacattag tttttctttc tgcttgtgaa aggggtggtg gtggtggtga 133740 aactagtcaa gatcggatat cctctgcaat accagcttct agaaaagagc gtttttgaat 133800 gggatgccac gtgctgtgtt ttgccatatt gcctgcgctt cctgcttgga gccagagtaa 133860 cagaaacctt gggcactggg aactgttccg tgccacgcaa attccactcc gtatcttcca 133920 ggcaaccctg tcgcaaataa ttcatgtcca ctacgcccct accacacaga atacaactac 133980 attgtgctgc tagaaatggg aaacctgatt cagatcagag aaggtagaaa aacatttagt 134040 tcaacacaat actgccttta tgaaaagggg cgtgcgccgg gtggtggtgt aaatcccaaa 134100 cctgtaagtg gggatagatt tcaagacgaa ttttggaaga aaatgcagaa tcaaaatagc 134160 atccagcttg actcagacca gtaataataa taacaacaac aaaaacccag ccagtccttc 134220 tagagctacg cctgtttagg ctgcgcggtg ctcttaatgg ccagccagcc tgttctcctg 134280 ggaaatggtg ctgctgctac agcgtgactt gctttgcgtg ctgcaataaa aggaaaacaa 134340 gcttgcacga cccaatagct tccttcagtt tgtgcctagc agcggggaga aaattaaaaa 134400 aaaaaaaaa aaaagcctga aaaggggtcc tgaggcaagg tgaatggagg acaggatcct 134460 agagaacagc actgccctgc aggatttttg taaacagcag cctgtaatgg ccacggttag 134520 agaaagaaaa acagacatgg agggaagcgt gtttacaact gcagcaaggg cgggaggcgg 134580 agggagggat tccccggctc tgcgctcggc cctcttcact ccggtggggc cccggggttg 134640 ggctgagctt cagctcccca ccccaatccg tgctttcttg gggggccccc catcttgttt 134700 atgggaaggt tactcctct cggctctggt gatcgcgtcc ctaatactcc agctgcatcc 134760 ttgcgggatg ccagcttgac tgacaagtcc tgcagccaat cgctggttgg gcccttagga 134820 aaggtggaat ttcccaacaa actgattggc tgagagagag ggcgggccct ggtgattggc 134880 gtgttattcc gagtagaaag tagtaaacaa ccttggtcca ggggcggtgg ggagggcgcc 134940 cggtgccagc tccctctggc tggcagggcg gggtggggaa gcacccgaga caaaaggaat 135000 cctggctgcc acagcgggga gggcaggaag ggggtggccc caaaagtcag cacctggagg 135060 cgtcgtttgg agccccccc cccccccc cgagccagaa ctgctgactt taagccacac 135120 atcgtttttt tgttttgtgc agaacctcaa aggttttgtt tccatcattt tcacttcttg 135180 tatggctgac gaagtctcca atggaatgat aaccgattta gtcgcttttg tccagaagcc 135240 ccttcctcac cgtcgaataa aaatttaaaa ttgtctttta cgaaagttgc tttaaatcac 135300 acactaaaat tgttgcacta tacaatacgc cattaatggc atgctggtgc accagacaca 135360 cagctacatc ttttgatagc aagttttagg agctctgagc ctattgggag cagctgggat 135420 Page 79

## PCT - Sequence listing for submission.txt

ggagaacata cacaaaaaga aacaacacat gacggcgttg ggaccacttg ataagaaata 135480 aggggttaac ttgccttgcc catagtattt ctggcagtct cacttgaatc tcccattccc 135540 tcactccagc ttcaccatcc ttacaggacc ccaggcggag gaaaccatct gctcttagga 135600 tggggggctc tgctcacccc gcacataaac atgctcacaa gtcgctatcc tgagcaagcc 135660 tcctcaatgt aaaaggggac caggaggcca gccaagccgg ctctctccac ttcaatgctt 135720 gttgaatata cagagaccac gttgtcactt ttcacaatca agatatatcg gtatcacgat 135780 atatcgataa cgggtacttt ataggagata acagtgcaaa ctggccacct ggcattctcc 135840 tttgccattc tagtccctca cctctgctat ctcctatgga gcctgccaca agcaacccca 135900 gtaaatgttc accccaagtc acctttgctg tataaaacat ggatttaggc tttccttggt 135960 ccttgcagcc tggcatcaga ccccaaacca gtagctactt tcattgtagg caccctccct 136020 ctggacactt tgttctgttc ccaggtccct gcccagacca cacacatcat tttactcaac 136080 gttggttttt atgctttcta gactttacct ctgcctgccc aggagaggcc actgttctcc 136140 accepttctcc ctggcccagc taccccactt cttgcagaag actgaaattt gttttcttag 136200 cactaagtct ctgatagggc tttaatgctg tatttagact ccactcctac gttaagaccc 136260 tgaacttcct gaggcctgga atggtattat cttcagattt gggtcttcag tggagatggg 136320 cttctactaa agtgcccgct gcaaacttgc caaatatttc taggattctt ccctagcatc 136380 ctgagtatgc ctacccctga aaatctttcc ttacacacgt gcaattaatg tgttttctct 136440 gctgggtcaa caactctgtt ttctctactt ggcaaatttc cactctgcct aaaatcactt 136500 cctctcttgg catacctttc acaacctccc accaactaca ctgtgtacca agagcagaga 136560 ggtctctttc cgttcttact tctctggcca gaattagcta caaaactaga actagcatgg 136620 tttgttggta aaggaagac ggagaggcaa aatttcagaa gtggtatcac ctgtacatct 136680 gcataaccaa cccattgcca tctgtagggg tgaagcagcg ccatgctccg tttgtggctg 136740 tgatggtctc cccctgcttt ctgtctgaag gcctctgtct ctgaggtgga ttcttactcc 136800 cccctccatc tcaatcagag atctcctcct ggctcttatg ctatcaactc tgcacatccc 136860 cgattccttt ccaccatgac actgaactgt catctccttt tctatctgac cagtcactga 136920 cttgctcaca gtttagtctg tccgccatac agccatatcc agtgttctaa gaattgtggg 136980 gttccacagc tggggctcag tctctgctta cgccctcatg tgacatctgt catcaaccct 137040 ccatctttct aagcctttaa tggtggaaaa gagtaaacct gtagataaag agtggtacca 137100 gatttcacct taagattaca gatacttgtt tgtgaataga atttgttctg gtacaggcaa 137160 atgcacggtt taaaatcaaa actaacaaaa tatacagtat attagctggg aacaaatagc 137220 caactaaagc aatgtaaagc tgggagtctg tattctggct caaagcccat cacggtgagg 137280 caaacatgat ggcctgagct tcaggatgct cattaccaca ctgcatcctc agtcaagaag 137340 cagagagaac tggttcccag gacaggggct ggtgctgcct aagtcttggt cttcccgtct 137400

PCT - Sequence listing for submission.txt ttaagttaac acggcccttg gcaggcatgc ctgaagcttg acttttcggt gattacagac 137460 cctatcaaac accataaata ataacaccac acatatatta catatataaa aactataaca 137520 cagaacactc aattggcttt cagtaagtgg gctatttttt tttctttgtt gcttaatgta 137580 ttctagatct gtctatgttt acaaacggta tgtcttctct actaacaaat aggatttcaa 137640 attaaaaagc tgaacagcaa aggagacagt gaagagacaa tctgttagct tttcatctga 137700 caagggatta atatactgaa tatataaaga acaaaattta aatgtcaaaa gaacaaataa 137760 tcaaaccaat aaatgggcaa attaatcaaa tgggcagttt tcaaaagaag cacaaaagac 137820 caatacatac atgagaaatg ctcaacaccc ttagccacca gggaaatgca aatgtaaacc 137880 acaccgagat tcaaatctca ccccattcac aatggagcac attaagacaa ccatcaacaa 137940 acactggcaa ggatgcaggg ggaaatgtgc ctgtacacat tgttggtgga aataaaaatg 138000 aagtagttta gatactatgg aagcctatat ggccaaaaat gtgctactac ctcacttcgg 138060 gatgtacaga tgtgatgcta agtcagcaca cgacacatcc acgttactat ccacatcagc 138120 caagcaatgg gaccaggaaa agatgaagga aatgtgatgc acacgcacag ctgtgtcaga 138180 tgtcaaggat aaaaccaaac tatcggcggg aagttaagga gtggacaatc atctgaagtg 138240 acgctggcca gaccaaagcc tatctcatct gtgtattttt tttttttaat gaaaataaaa 138300 gggaggcttt gtacagaggg aggaaatgat acagaaggga aagaagggac aaacagaaga 138360 taatgggtgg taatcaaagc acattttgta tatggatgaa agtattaaaa caagaaaaca 138420 gccatcttat cttcacagac agcattctgc tctatagata accctgagtg gtccccaacc 138480 ttgcctgtgt gtttaaatca ctgttacttc cccagaagcg gatttagttg gtttagaggc 138540 tatcacgtga gccttgaaat gaaacagtag aaacaaagtc ccagatgatt ctaatgagga 138600 ggcaggtttg agagataaca gtaaacctat ttattatccc tctactgata gaacttgtca 138660 tttcagacaa caccatgtaa agtggcctaa tacacctgtc agttcaccgg tgtgctggtg 138720 tgtctgtggg tgatcatcct gggagaatta ccatgtcaaa gggcacaggc actggtacat 138780 acacacaca acacacaca acacaccatc ttccagcccc ctctgccaag tggggctgtt 138900 ttcctataga tctgtcatca gaatctgtga ctgaacattt tagattttca agcatggggg 138960 gctgggagga gctctgaata ctcataaaaa ggactttctg atgtgttcta ctacaacatt 139020 tctggttctt ttgtttgttt gttgttgttt acacctttat tatgaattca cttagagtct 139080 aacaaggatg gacccatgat ccaacatcag ttaagtaaag agcgtatttg ctccaatgat 139140 ataaaacgtc atcttattaa acaacgaacg gccacatgtt ctcacatcta cggctggata 139200 tcatattctg tcccttcaca tactggcacc ttgctagcta tttaatcatt aattacttag 139260 gcaccatggg atgctttaat tatctggtaa tttcgttggg cttgtttagc actattacta 139320 ttatcaccat tattattgtt gctattattg acgactgtag agtcagtttg tataattaaa 139380 agaaaccaca tagtatttga agtatattaa ctttataaac acaggaagaa ctgacatctt 139440 Page 81

PCT - Sequence listing for submission.txt

gctaacattg gttagactcg cattaaaggt atggttctat catttatttg aatttatatt 139500 tggcagcatt ttgttcagta ctatttttct tattaatttt taagcatttt tctctgggaa 139560 aaacttttct tctatgatgt tgtatagcaa attatttgca cactgtagcg ttatcacatg 139620 actaagtctg gcttatgtta tttccagaag atgcttaatt ccatgccctt agaatctgag 139680 catgtatgca catgtgtgaa cccacagggc aactctgggt gctgttcctc cctccaccct 139740 atttcagaca ggttctcttg ctgggctgta gcacaccaat gaagcaaaca agtggctggc 139800 cacaagcccc aggggtctgt ctacctctgt ttctacataa cggagatttc aagcttgtgc 139860 cactgtgccc gtgattttta agatagattc ttcgacttga agtcagttcc ccacatttgt 139920 gtggcaatca tgccattgat ggagctattt gccaagttcc ctgtgctctt agaactctca 139980 ataaataaac gacaccaaag gtcttttccc ctcactagta tgaagtttat tattttttt 140040 tattggatat tttctttatt tacatttcaa atgttgtccc ctttcctgct ctcccaaaaa 140100 ccctctgtcc catccctcct cccctgctt ctatgagggt gttcccccac ccactcactc 140160 ctgcctggtg gcctggcatt cccctagact ggggtattga gccttcacag gaccaaggtc 140220 ctctcctccc attgatgccc aaccaggtca tcctctgcta tgtgtgactt gagccatggg 140280 tccctccatg tattggtggt ttagtccttg ggagctctgg ggggtctggt tgcttgatgt 140340 cattgttctt tcaatggggt tgcaaacccc ttcagttcct tcagtctttt ttctaactcc 140400 tccactgggg accctcattg gggaccacat gttcagtcca atggttggct gcgagcatcc 140460 acctctgtat ttgtcaggct ctggcagaaa gtactttttg gcatccacaa tagtgtctgg 140520 gtttggtgat tgtatatggg atggatcccc aggtggggca gtctttggat ggcctttctt 140580 tcagtctctg ctccacactc tgtctccaca tttgtcccgg tgagtacttt gtaccactta 140640 ctaagaagga ccaaagcact catactttgg tcttccttct tcttgagctt catgtggcct 140700 atgaattgta tcttgggtat cctcaacttt tgggctaaaa taccaaggtt ctaatcaact 140760 caattcaaac caataaattt tgacttgaca tttacaacgt aagcaattca gatgtagggc 140820 atagcactag ctggtagagg caagactgga tatggggagc ttctaaccca agagtggaaa 140880 gtgttgggag aacaagactg agggcttggg gcagtgtggg tgaggtggaa agctaactgc 140940 gtgccttagt gcatgcctta ggaaagtatc tcagctaggc tactatagca gctatgcatc 141000 tatctatacc agagaaaccc cacagagctg gacatacaga tgagctcatt catgtctgat 141060 gagctcattc atacacgtga tagccatgat gttctgctga acgttttatg agataaaacc 141120 aagtttcctg tttcagagct gtgtgtttaa aggtatgtcc ctttatgaac attaaacaac 141180 cagctgtatg tggtggtgtc aataatccca gaacaagagg gctcatggaa gaagggtctt 141240 aacttcagac tagcttggaa taaatagtgc aaccatgtct caacagacaa acgtaactaa 141300 tggtctcatt ccagacctct taacctatga cctcttgggc tgaggtcata.gtcggcatag 141420

PCT - Sequence listing for submission.txt ggaagtgcct ggctagtaac aacaacacag tcacacatat ctgtcctcaa ggagctcctc 141480 gagtaaacac ctttgctctg atgatgacaa gcatggccac agtccctgtg cttgcagaat 141540 cttggttaga aagctcccaa caccaccatc ttccactagt tagcctctgc tgttccccga 141600 actgaatccc taagtaccga atgctctcct gttccacaca gaaacctctg agaagcccag 141660 tttacagaat cagagactgg gccattcctc gaagcattgc taaagaactg gcaggagtca 141720 ctcaagttct caggagctat gggaagataa gattctcccc aatgcggttg cactgaaaga 141780 cagggcagta aagaacaatt atgcctaacc ccgatttctc tctgaatcca tttattactt 141840 ctcaatttag gagagtcact cttgtacctg caccctggcc actactcaga aaaacattag 141900 tgtatccaat gatcccttta gtaactactg gagaagcagc tagctgaagc atgggggaat 141960 taaggaagac cttaggagtt caaaacccca aagtacaaac gcactgtcag cacacggaga 142020 gatctgtttt tttatgcatg ccttatgcaa actggcctaa gctaaaaaat gttataaagc 142080 attttgagga gtaaattttg atttcagggt taaaaagaaa tgtacagagt caaagaatct 142140 ttctgttggc tgataacaga gactccttgg aaaaattgac atttcttttc gagaagcaaa 142200 aggtggagta gaaatagtgt gagcagcata tgatgtcttg tgacaatgca gagaaggcag 142260 ttgggagctg ccactaatgt cgagttttca ttaggctcat atctccaact tttggttttg 142320 tgaggctgca actcaattgt gtagtaaaaa aaatttgtag tccattaggg tgcttttaat 142380 attcactata tctactatga aataggagct tagatgatga tgatgacaac aacagtaata 142440 gcagcagcta ctttgaaaca ctcacaggca ttgtgagttg gagccctgag cactaaccac 142500 tgtaatttgc tatcaggacc actgggtatg gcattcggaa aacggacata tgcaatcaat 142560 gcttgtgaca tgggagaaca aaaccttgtc aaccaactgc aaacagatgg ctcatggaca 142620 acaaaacctt agagaaaaat gcaggaatat cagcggggca gtggggggga aaagagaaca 142680 ctttccagac tgtatgcata gaagggcctc aaaggccgcc atgacagatg tgttcctgta 142740 tcggggtcaa caaagaataa agcccatagc acaattctta ggaaaagttg aaatgcctgt 142800 tttgtaaata aaacacaccg acttaaattt ctactactta attttataaa ttccgcttaa 142860 atatgtgtct aaatacactt ttttcccctt gttttgagac atggtctctc tacgtagccc 142920 tggctatcct agaactagtt atgtagacca ggctgacccc tgacgcgtgg ggaccctttt 142980 gcttcttcat ctggagtgct gggattaaag acatacatca accagctggg cttaagtgtc 143040 tagattttta acttctttat atttattctt accctcagtg ttattgaaca ttgactgtgc 143100 agacttcaga gtttaccaag tttgaggggc tggccaaatc cttctggact tactgagaaa 143160 ggaacagacc caggacaccg actggagcta cacggtgggc gccatggcgc caggccgaga 143220 cacgtggatc cttcggcttt gcttctgtgt ctcagctacc tcagaggttt gctgtggaat 143280 cactagtatt ttaaacaatg caaacgcaat tacagttgaa gcacattctc taggagaagg 143340 aaaaggagat tggcatgtag aagcttcatt aaacttttgg ccttttcaaa gctaaacgag 143400 tcttaagaaa agccataaaa agttcccgtt gattgattta aaaacaggct ttttttttt 143460 Page 83

PCT - Sequence listing for submission.txt

tttttttttt ttgcaattag cagatctaaa tctacgaaag ggagaaacac gtacggcact 143520 tttagttaac ttcctgcttt ctctgtgtat ttcaaatcgt aacaattaag actctctata 143580 gacacacgta cagatacaca aatacttagc aggacgtaaa cttctatttt ggcttcatga 143640 aaatggtagt tatgtttcca cacacacaat gaattctggc agtttattta caagcagaca 143700 tcccatctgc accagggata ataccctcaa ctatgtgaca tgctacatcc ctcctgaaca 143760 cagtagggct aggaaagcac tgagaggata taaacatgtt cagggcttac aatattcctt 143820 cctaatgctt ctttccccaa cttactgtaa cgatttactg gaaagattgg actaaattac 143880 cgtcttccct ttatcgtccc aatttgtttg catttggtat cctctccttt ctcttggaat 143940 ctcccttgct tttccttttg tcagtaagtt aaattgcttc tcctcccaca tgcataaaag 144000 cattaattta taaaacacat agctgtatgt catatctcat gtaattctat tttacatttt 144060 accactaget agacttatet aacatgaaca aatagatatt atttactgta gecagaatga 144120 gaattatcta atgccactta catagccaga aattgatttt tgattaatgt ttaagcgaaa 144180 agcaaacaaa cccatctgct ctgaaaacaa acaaacaaag aggagcagag cactgagtcc 144240 teggttegea ggeatteetg caggeetagt geeteagegg etgeagaatg gggeeettea 144300 ccccagggga aagcggacca ctgacaagaa caggactcca ggcccagact ggagtttctt 144360 ggactgggga ccacaaacaa caacaaatct ctaaaccctc tcaggatcag cagagaattt 144480 catcttgggc gcccactgga agtcaaggaa gttgttaatg gtcatgtttt ccttcttccc 144540 tcttgttcac taggtcagtt aaaagacaaa gaaaaaggct gggcatggtg gtgcatgcct 144600 ttagtcctag cacttagaag gcagaggcag aggttctctt ggagtttgag gccagcctgg 144660 tctacagagt tagttttagg agagctagcc ttcacggtca tctgcccaca cacacacaca 144720 cacacacaca cacacacaca cacacacaca aactgacaaa atgtaaatca agaaagaaac 144780 aaaaacaaag aaaaacagcc ctgtgccatt tattcttata atctctgcgg tttcctcagt 144840 atgaagaaca gagtgcagtt tatagttctt gtccactcca tttatattga atatataaat 144900 tattttctaa gatacttata tacataacca aatttgtttt taacaaattt aatgaaaaca 144960 ttcagcatga aactaaatag cagtaagact ctcagatggt gtcttaggtt aaaaacaaga 145020 ggagcactcc aaccttttct ttgacaaggt ctcttgtatc ccaggctaac ccgtatgtag 145080 ccgaagatga cttttaacag ctgacccagt cccttccacc gcttctgttg tactggatcc 145140 cagggcctcc acgcacccca gagaagcact ctaacaactc actgccagct aagctacagc 145200 ccggcctcct ttggagcact ttcaacagcc aaaactgaca caatacatac gcatcaacaa 145260 agtcccatac caagcctgat gatgcaaaca caacttgaag tcttattggc gacgctccgg 145380 atactaccag ttgctaaagg aacagagtgg gactgcgact gcattctgaa acattttcta 145440

PCT - Sequence listing for submission.txt caaatactca tcctgcacga agaagtaagg tgcaagtgcc tttatgactc tatttccact 145500 ctagacgctc aggctcaagg cagagcgctt agatcctgct gcacttccat aaaaacaagc 145560 ctgatttatg ctgaaagact ttaatgacaa agttgtcctg atgtgcgtgc gtgcgtgtgt 145620 aggacctaga gaacaagggc ctttgtcttg ctctgccgaa gcacagtgag catttcctga 145800 gccctgattt agcctttaac tgatggttct ggtttgtgct tcaacagaaa taattgcatg 145860 actgaccaaa aaaggaaagg ccaaacaagt cttaaataat gattgttggc gtaccaactg 145920 caccaacctt ttctaattac aactctccat tttattattg tcaggcaaag tgagtacctt 145980 aacttgaaag gctaagctga gggggaaaag cctttttgtc tctactttac aggtttgttt 146040 ttataaacac tccctcagtc cccccaaagc aacaggaggc aggcacaatg accctactga 146100 ggagtacagc ttttacctcc atgggacaat agattgcttt tctgttagcc cctgggagta 146160 aaaccagctt taatatggat gccctttcct tatcaaagac agcagggtaa tacggggagg 146220 gctgccaagc ttgggttgtg cggacttggc aggtatgagg cctacctcgc ttctacacca 146280 cgtcactcaa ggaacagagc agaagaaaca cgttctggaa ctttccagag aggccatcct 146340 tgttcatgta ttctagtcca gagttctact tctctctaca gagatggatg aaacaaaagc 146400 aaaacaacac agagaaaaac cccttctaag ggagctggag ggaggagata atctagagag 146460 aggatgccaa aagtggcttg tttccaagtg acaaaatgca cctttgctgg ggaagctagc 146520 aaggtagaag cccctgttca gaacttttca aggagcagat gaagacaaaa aaatgccacg 146580 caatggggga cggaatcctc tagatgtcga gaaaaagcag cggccatgcc cagggagcag 146640 gactagagag aggcaagcca actcctgctc atggcaaggc ggcttgcctc tccagcgcac 146700 tctgcagatg tttccgcacg ttgtttctat agtctgaaga cactccgctg gcagtgtatt 146760 gttggatgct ggcagaatct ctagtcaaga ctagcaactc cacctccttc ctgacatcag 146820 caagggggaa cacaccagga gccaggagac aaggtgtagg tgcaggagac aaacaccgtg 146880 tgtggtccag agctgaactt gctgctggag actgtcctgt caggaaaagt aaaaaacaaa 146940 ccaacacaaa aatccaggag gtgcagaggt agaggcagag gcaggcgggt ccctgtgaat 147000 ttgaggccag tctgctttac acagtgagtt ccaggacagc aggggctgta tagagagacc 147060 ctgcctcaaa aaacaacaca aacaaacaaa aacaaaagaa gggggtgaag aagagaggga 147120 gaaggtgggg cgggggccag gggttgggta tggggaggga aacttaccct ggtggagaca 147180 gtgaaactgt tgtttgccac tgcctctctt aggtagggtc taactgtact cctgactaat 147240 cttcaacttg ctgtattaat caagttgggt tccaactact cttggaacta caggtgcaac 147300 ccaccacac atcgaagtct tggcgcacag ctctaggggg cataggaaat ggctttcccc 147360 gtgccctgta gaaatggaac tgaaagctca tcatggcggt aagactgttt tttagctcac 147420 actctcacac tgcaaatgac ctaatgacac agcagggcct ccggtaccat cctcactccc 147480 Page 85

PCT - Sequence listing for submission.txt

acgctcccac tccatcctaa tgttagctca cttactcagt ctaccacagg cttaggtgac 147540 atctgaagga atagcatact ataaaaacct gacttggcca ccacagcatg caagctctaa 147600 ggcaggtaga acatactggg tttttgttgt tgttgtttgt ttttgtttgt ttgttttct 147660 tttccagttt ctcccctcaa agatcttcac atcatgagtt atgatactcg ttcattacat 147720 cctcctagaa tggctccagt caagaagaga aggctcaatg acccacccca actgcaaaag 147780 caaaattatc ttagaagaag aagaaaagga atggaccatg taattaaaat tacgaggggc 147840 agtgacttac agaggtaaaa agttaatcac aaggactatc tcaaagccta gtgaaaaatg 147900 gggttttcag aatcagacct gtcaaaggta accacgagat gcaataatgt ggtttggaag 147960 tctgggtgac gggcagcagc aggaacaggt cagggaaggg gggagtaaat tgtttgcaaa 148020 atgaaatgca gaatgaaaga ccatttgagc acacaggcat ctactctaaa acctgcaaat 148080 acctcagcct cagtcctctc acggaggact ggggagtgtg cactcttctt gttgctttag 148140 aggaggtctc tgctgcagaa gcagggtggg tgggtagagg ttcctactga aagctacttt 148200 gggtatccag caccccgggg ttggtagcaa ggagtccctt taatgaataa atgaagctgg 148260 agctttccag atgtttcatt aatggggcac ccagaaccaa tgctgctgca cccgtgcccc 148320 ctacaactac taccggcatc tgggagcact tagctctaaa gtaggttaga gctggagtgt 148380 aactgtatct atgtgaagac tgagtttgta tatgggaagc tcagcataca gcaaggccct 148440 acgtgctggc tatcactgca atccaggcaa aggcttcctg gaaggctaac gaactataac 148500 ttggctgata atgccgttcg ttcatggctt cgtgagcgct ccagtcccgg tggccttggc 148560 gagagttgga gttgagtgga gactgcaggg acggaaactt ttccagcaag aaagagtccc 148620 tcttctccca cggtcactaa ggaggatact tgtatttttc caggatcagc tgagtcgtca 148680 caagaggaga gtggagggc aggaggagac cgcctcaggc ggcgacaagg gagcccagca 148740 cctcccctga agttgcagcc agctgcttct tggctggaaa cttatttaag ttgtcctctg 148800 tcccacttct gaggctctac agggatgctc tgggcactgg gatccatgaa caaacaggga 148860 tgagcggagc gaagggaaca ctctgctcag atgagtctgc ctctcaacgc cctttgccct 148920 cactgtgctg gtggggagtg ggggtggggg aatctgatgg gcaaaagcaa ggggcggaga 148980 tgtgactgtc acgcagaagg tgtgcccagc tcttagaaaa gtgaagaatt caagaaagca 149040 aacacaagca tctctcctgc ttctactccc tagttatccc aatcccaatg aatcttggaa 149100 taattttagt tactgacact ccagatagca tcttcaacag tgaagccaga agcagagcaa 149160 agggatctta gtagcatgtg ttaattttca tgcaggatgc aaaacaggca tttcaacttt 149220 catctttctg gatgcagcta cagtggccac catccctgac caggactctg tcttcatctc 149280 atccttctaa cagttatgca tcaagagtgt atcagtaacc atatcaccat gcaggatgtg 149340 taacttgcct cttctcccc gtttcaggac agccagccac tggaaagtct gaggggcccg 149400 gctaactgaa atctgcagat acgcttagga atccctccca accagccggg ttaacctcca 149460

PCT - Sequence listing for submission.txt tatgtttcta atctctaact tgtacccctt gtgcagcctc aaagagatac atgtcacttc 149520 ccgcactgat ctgacaaccc tctctctgag aggctcataa gcaccctttc ccaaggatgg 149580 tcacttacag aaagctgcag gcaaagtaaa tccaagtctg ggcagcatat aataaatggc 149640 tagtggcaga taatgaaaag gctgaaatca caaaatcaaa attctttcca ataaaggtga 149700 atcccacacc tattcattaa cagtccccta ctgtctaaga tgtttgtgta agatcaatga 149760 ataagccatg tcagaagact tgccgactat ggaaactatt tggataatgc tccaaggggc 149820 tcaggaatag gacagatcca atttagaact ggggggggg gggaggggga cactctgtct 149880 ccaggccagg tgatgaagac atacccaggg tcattctttc accatgacaa agacatctcc 149940 attgtttcaa agtcactttc agtctcctac aaagttatct ggagaatagt gtgccatgtg 150000 aatgaatgtt caaacttaag caagggtacc accttccttt cagaaacaac cagagaaata 150060 cgaaactgcc tctggggcat cgcaataagt agctggggct ggtaagctcc aagtcttacc 150120 tctgaagtca tcagtaagca tgggacagtg aaggctcaga cataacatct catccaagta 150180 atcaagagta acgccaccca tcacagatgt actggtgcca ccctgggcac agtgacacac 150240 cgagggcact gtataccctt cctgaaggag ttaatcactc aaatgcacaa acctaatgtc 150300 acgagagacc ccagtttaag agcaggttat ggggtcatag gatgagtgct cgttaaaagt 150360 gacaacacca tgcaaaatca gcaagacaag cagacccatc acagcctcga gaagaccaca 150420 cagataagac acatccacac gaccaaagac ttgggaatga aagaaagcac gttagtggga 150480 aaactggtgg aatttaaata aagcctgcta agaatattgt gccaatgtta gtgtcttggt 150540 tgtgataact ggattatgat tatgtaagat gttaacatga ggagagctgg gtgacatttc 150600 aggaactctc tgtgccgttt tcaacttttt ctaaggtttt ttttttttt tttaaatgaa 150660 gctgaggagg aagcagagag cctgggaggc tggcttactc tttagtttgc tttgtcactt 150720 tgtccctggt aagtagggtc attatactac agagctggct tgtgttacag ctcttccgat 150780 tttgctccct ccatgtcttc ataacttttg gggaatcgga tgttactcag gtgagacaga 150840 agatgagtga agtcacaatg tcattggaga ttagagagag aaagagagag agacagacag 150900 atagacagag agagacagag aacaaacttc aaatttataa acacattatt cttccacaaa 150960 ggtccacatc acacactccc cccatttgtg caccaccctt gacaacacag ctgtgtggtt 151020 ctctagaaga tgtagttgga accaactttt agcgtcctaa ggaatgatgt catcctttgc 151080 tctataggag ctggttccag aggttttgtg gaacagcttt ctttccagaa agcagccagg 151140 tctgaagctg ctcagacttg ctctagactt cttctgtcta cagagtacgg caacatctcg 151200 tctacaggga ctgcgactgt tccggctctt tgatcatcct gttccctaaa cttaacttcc 151260 ttaagttgca aaacatttac tcttggttgt ttgggtcctt cctcggtata gaaattcata 151320 ttctctgttt ctctctctc ctcaacgggg ctgtggactg aacttacgtg aacttcttgt 151380 gtttgcctgg ctttcactga ccctacacct tcagtccttt tcctttgtac ggagaaagaa 151440 atcattaaag agaaaattgt teettaaaat catecettte eccateetee aageettetg 151500 Page 87

PCT - Sequence listing for submission.txt

tagaaagtgc agtaatgaaa aaaagatgtg tactcacact ttgcttgtat cagctatgga 151560 tgggttccta cctatcttat tgccaaactg aaaaactact tggaaaatgt tccaatgggc 151620 tcggtagaat aatagctcca agtcagaact ggggtgcatg gggtgtgtat agtctccaga 151680 gtggggaagg ctggctactt gtcgggtcct gccctatcag cctaccagtt actacgctgc 151740 tcttccctgg cagctcagtc agtgtgcggc gtggtctctc ctcctggcca tctaaaatgt 151800 ctgcagttat tgtaacacag gatgtgattt ttagatcaat ataaacctgg tgaacagatc 151860 aatcctgtcc ctcataaaca caggcaagta tctgggtatc tagacggtca tgacctctaa 151920 cctctgaacc aaattctcaa cccaaaccat cattagcaga ttgagcccaa gtaaatgcat 151980 gtgtgcagaa gtagaggttg actccttctt aactgctagg tttataccag ctaccttatg 152040 gggtgcccca aataccatct ccaactaaaa ccctttcagt ttaaagggca aagggccctt 152100 aggtaaatgg ttcatttggt gaggcctcct ctctttgagc agtcacatga atccacaatg 152160 qaqaaaqaqa ctctaactcc tgggatttct ggtaacctaa agagttccat gtctttccta 152220 cacaattggt ccccagacgg ctcaagtctt attgaaccga tatatcaatt ctggtggagt 152280 taaaatgctg agtaagagaa aataaagctg aagtaagcgt aaagacaaga gttgttttgt 152340 tttagctgga acatgattct ttgatgagaa aactctcata aacaggaaaa agcacattat 152400 tgaagctgaa gtgtttgatg gcttccattt tcctaagagc atttcgcctt agacacaggt 152460 gataactgtc aagagcagcc agagtgattc ctctggatat ttctaccata aatatttctg 152520 aggtcctact gtgtgccagg gattgtagtg atagtgggga tacaaagata ggagttgagg 152580 ctatatacac tcttttcaaa ggcaaagtct cgagctctaa acgcacgact caaacacaaa 152640 accatgatat gcaaaggaaa caaatggttt gtttcttggg gacaggttga acagtaagta 152700 tggtgacagg ttttaattag aagacttcag aagagcaggg ctgggccatg taaatcaaat 152760 cctatatcag ggtctgtact aaactcagaa agactaactc aggcagttac tagagttatc 152820 atgatcctac acagaagttc atataaggac cctaactctg aaagcagaga tttgttgttt 152880 tgttttttt ggctgcctct agctagcaca tttatgaaaa acaggttaag ttactggctc 152940 caaattactc cttaataaaa aaaacaaaca aacaaaacag cataagcttt taagattttc 153000 ttttttaaaa cctagaaaac agtctccctg tcaagagcag gcatgattaa tgacttctgt 153060 gctgtaagct tgggtatccg ccgtgttact agtgtgtgat actcctaaca gcttgtaatt 153120 gccccgagga tacttttgga actgaaaggt gtggggcggg gcctaccttc ttaatatctc 153180 cataattttt tggggggggg ttagactaca tttatcaatg ggacattgaa aatacagaaa 153240 cattgtcaag tcatccacat gaaattatga atgcattatc atctgaagag tcatttccat 153300 aaaacggcag atgacaaata gtcagctctc agtatccatg ggggatgggt tcaagatccc 153360 tccctcagac atgaaaatct gagatgagca agtttcttat tatagatggt aaatctgcat 153420 atgatttaag tttttcttcc tgcatactag aaatcagagc tagatggttt gccatacttg 153480

PCT - Sequence listing for submission.txt agagegeaca aaegetgegt aaacagteaa eegtaeggea etgettagag eagtggttet 153540 caaccttcct aacgctgctt ctcaaatgct gggaatggaa ggtgtgtggc accatgctca 153600 gctagaatcc cattgtaagt atggcactgg ctggacctac atctgcagaa ctccagggta 153660 ctgaagggct gtactgcatc ctagcagctt cctaggtctt aggaagctac caacctgcaa 153720 actccttctg aggtgaaacc acaacagggc atccaccaaa ctcaaccact ggaacccaat 153780 gaaccagtca agttaacaga acactgagcc accttttgtg ctccatgaca gccctgacag 153840 acaacatagg caagctctat cacactgtat ggctcaacca gccatatttt ccatagaggg 153900 gaaatggagt ttgctgcttt gtttggcaga tgcaaagagt aaagtagagg ggaaccaaat 153960 gagcttagag cacttgggaa ggtaggctga cttcctagtg tgttccactg taccacgcaa 154020 teccaetatt ageteceeae tteetetggt caacaceaga tetgaaegaa acetaeagga 154080 aggtttgaag gtacctggcc ttctaaattg tggcttacat aataacatca ggccctctgg 154140 tagaccctgt aggtcaacaa cctaggaagc caattcctat agtccagctt aaataacaac 154200 cttgtgtttc aagggaaaat aggaaggtgt ggaaagcctc cattgacacc ccaactaact 154260 tgcctttgct tttctagaga caactatgca cttaagaaag gcaatcgaga tctgcagtta 154320 atttacagtc actgagatga ctcaacatac gttcatacta gtagtatctt cagcttctcc 154380 agttttttt ttttaaagta gaaacaaaat gtccggcctg acattttaaa aacctgacct 154440 atgaggaact tgaaatggtc agttttacaa attttccttc ctttcctctc tttcttctaa 154500 gtcattcact gaattatgta actgactcct agaacacact gcagacccca tatggaataa 154560 gacagcacaa ctcctgcatg catgatcact gctgggctgc aggaatgtgt taagacacat 154620 gtctgtccct cagtagtgta gacacaatcc ctgtcttgcc ctttagaagt ttataagatc 154680 cctgggcaca cagaacttgt gcatcaagtt aaagactaaa gggccagagt ggggttgaca 154740 agagcaattt cttaagagtc tgaagaaagg gagccagaaa catggagaag gcagtgaaga 154800 ctattttcag cagagagaag agagaatgtt attgagatga aaatgtggat ggcagattcc 154860 agtgcaaggg gtgcagatct catagaaggt gggtcaggga tgtggggttt gaaaatggct 154920 aacagcgagc tccattatgt cacagcagag atgacgcaag gagctgtctc ccagcaggtg 154980 agatgatgct gggtaggcag gaggtagaca caggaagtgg atttaggaac ccatagcaac 155040 catgagggag aatgagggtg gaacttaaat aagggagcat ttacgtagaa aagagttggc 155100 agaattaact ccatgggaaa cttagtggaa ctgaggacaa cgtgtcaact acaaagacca 155160 gaaagcaggg ctagttagat ggctgagtga ggaagggtgc ttgctctgac ttcaatcttc 155220 aggagtcaca ttccaggctc tatctccaca cgtgtgctat ggcacgtcca cacatagagc 155280 aaccaaataa ataaacataa cattgaaaga taccagaatg catgctgtct ttgaaaaccc 155340 tattcattgt cttaagtata agatgacagg gccatttccc aaaaccatac atcttgtgga 155400 gacacaggtg gggcaaaacc aggtcaagtt cagtggacag caggtaccaa atggacttat 155460 ggctatacct ggtaaggcaa gccatgaaga tgatgagttc tggctccctc gttcttcggg 155520 Page 89

PCT - Sequence listing for submission.txt

aacctgaaat ctggagaagg gggaggggg aggaggagga ggaggagaag gggaagaggt 155580 agtggtggtc actggtggac agggaagaac atctaggagg aaagaagcta cagaagttac 155640 tgacggcagg agagggtcct tccaggccat ggaaacactg ggcctcaaag gacaggctgc 155700 tccagtctga tgctgcatca gaaacccaca gtcaatatat tgaaggtgga aatctgaaaa 155760 qcacttattt ttataattaa atacttttat gatagagaaa aaagcaaaca gagaaaaaaa 155820 agcaaaagca tcaggtttca cccaaacaca gcaatggtca gtttgggttc atctgagatg 155880 accaacaaat gccaatatta gagttacagt ttttcaaggc cataattgct acatttaaaa 155940 catcaagagt cacagactgt ccccaaacag tcagagccct catgacctgc ctgtcccagg 156000 atctgagagc tacagtgttc tgcttctatt tagagcatta tgaatgctaa atagaaatgt 156060 tcaaaatatt ttacaaaatg aaaagtagac atcagtccac tgcaggtcta aggctgttct 156120 ccaactttaa aatacattag ttctttttt tcctttcccc tttttcttt ctggagacaa 156180 ggtctcaggt agcccaggct ggcctagtat tttatgtgtg actgagaatg accttgagct 156240 cccgattctc ctgcctccat ggaccaacga gtgcagttct ttccccttaa gagtcacata 156300 gttgaaccag gaaggatggc tcatgcctgc aatcccagca ctcaaagggg aaaggcagga 156360 gggctgtctt gagttcgaag ccagcaggga ctataaagtg agctccaaga taggctgcgt 156420 tgcagaatca caacacgtct caaacaaaca acgtagcaga catatctaac ccttaagcat 156480 gacaacgaca catttgtatg atacctgaat aataagaagg gggtgcatca ttataattat 156540 tattatttta cagttgtaaa catgggaaag tgctgagcag ttcaatgagc ttagggctac 156600 agtcactcaa ctgcatgcta gctcagatga ggataatgca gaaacgcctg ccgggaggaa 156660 ggaaggagca aacacttctg ccactccgtg aaatgtcact caaataacaa aacaaaccca 156720 ccgaccgacc tctcaggata aggaagtgta gcggagtggg aacacactct tgactggtgt 156780 gtgaggggcc ctgggattct gtacctagca tcacacacaa aaactgcaaa caaattcttt 156840 aagccatgct tggtaaaaat gactcatttt gaacctagtg tgaattggag attatttttc 156900 aattaatgaa gtttttctag ttggaaggac ttacaacaag ggccactatc ccaaaagccc 156960 ttagggactt gtctaaatga gtaaaaatat tgtgcaatta ggccaacaac tgaaactaag 157020 tgcgtctgag agcttaaaag tagtcgttct caagtactag ttcgaagagc atcaaatcat 157080 ataaaaggtt caaaggaatt taagtgaact gggttgactt ttcaaggcac tgaggtaatt 157140 acaaaataca ctaaatagca aatattaggc ataccctagg tttagacaaa caaaaccacc 157200 ctaaaaccgc cagatcatat agacacacac acacacaca acactcattt tctctctct 157260 tctaacacac acacacaca aacacattag ggtaaatatg tattagaaaa acctttgcct 157320 aagatttcct ttaaacagtg ggtattattc atttttgttt ttttctttac agaacattaa 157380 tttctttgca aaatgtttgg ggtacagaga ttgcctgaca agagtggcca ccatgaagct 157440 tatgggcacg tgagaggaga ggtgaagaag cctcaatctt tctgagccca tttcatctcc 157500

PCT - Sequence listing for submission.txt cctattattc tccacgattt tcaaaagcca ctctactaca aacctgagaa acacaggagg 157560 tcagattcac aaatgaaatc tctttgtctc ccttctgtat gcacccagca tctgctccac 157620 ctagctgacc gttacagggg cagggccagt gttaacatgt caagtgggca gagggctctc 157680 tgcatctcct agtacatttc tggctacagg tgaactaaat gacaccaaag aactgctctc 157740 aaacgtgcat cccaaggtag agctacaaag gttcaatata accccagtat tttgagagat 157800 cttaaaacgc agtcaaagtt aactgtcatg tccatagcaa ggaggaactc actccttagg 157860 atacactggg ctggtcttcc agtgggcatt tcagagagcc ctgctttccc atatcagctc 157920 catcctgtat cctcaccgtt gcttccaaca gggaaccgtc cacatctgac tgcccaatca 157980 gatttcagca ggtggcatgg gggatccaga aagcatttct ctgcaccttt taactctgaa 158040 ctgcatgcag aacccgtggt aagaaatgct tctctgatcg ctcctagcac ttttagtggc 158100 catgttaaat cagctaagta agaatgactc ttccatctgt gttaagtggc cttttaaagc 158160 taattcacac tatctccaaa taccctgaat taccaagtct gagggctgcc tagattcctg 158220 cttgtaagca atagaatgac actgaggact ctcggctctc ttctctctc catatcctct 158280 ctggttcact gagaaccaaa catcatctaa acagaacaaa aacatcagaa ctgaaggaat 158340 cgccaaagta tatacacgtg actcccgtct gaatgcattc agatccgacc agtgactcca 158400 agctttctgc atgtttccca tgagctattt gccctgaatc aactcctcac cacaactctc 158460 gaaatgacat ggacctctgc tgttgcactt attattcctt ctctgatggg gagtggttat 158520 gactgaaaat tttcgcgcaa ccagcctcta aacagaaatg cagtttattc tgagtactca 158580 aattcaaatc tcagtaacac agcaattaca ttttaaaaata aattctctcc atgttcttgc 158640 ttctaagaag agggtttagt gggatatgaa gagtctaatc ctaggcaacc atatggccag 158700 gccaattata aaccccatat atgttcacac atcaagcagg gcaaactgct ctgggaacaa 158760 cccttaatat tttattgcct gcccaggtgc ctgagcactt ctgagataca cctgtcacag 158820 gaaaatacag cacttccttc catctttacc ccatagttgc cagacaattg ggcagagcta 158880 aagtgggtaa tgttgcagtc aacacttccc taaaacattt atacatgcca ctgataaaca 158940 atagaaattt aaaggagata caaatgtact ccccaaaccc taaatcttcc tcccacggag 159000 gcctaaaaac ttaaaaatct tcatctacct ggcacagaag aaggaataca aattccaagg 159060 ggagcctaga tttatggcct aaatatgtct tcctctagaa tatttaatac acttacgctt 159120 tagtcattcc atacattttg aaaatactct agcacgataa attacagtag ctgcatcttt 159180 catggttgtt cacataaata tcatttggct ttcaggaaac caattacgga gcggtaaatc 159240 atttttacat tgcttttcaa aatctttaat ttaacttgca acacggacag ggcacacaca 159300 ggctcccagg aagaacgcag ctcacacatt gtatcattcc ctcttgtccg agtttagcaa 159360 caacccctga gtaagccaca acaatatttt catgttctaa aatatttggg ttatatctat 159420 atatttcaca caggtattag gctcagcaag tatttcctaa cctcctgtag tatttagttt 159480 tcaagacttg gggtaggatt gggaccacat tgatttcagg gtgctgactg tacttctgtc 159540 Page 91

## PCT - Sequence listing for submission.txt

accatcagct agtttaagga caatgactgt cctggcagac accgcaaaca cagagcctct 159600 atggtgttct tgagaaatca agaccatcat ctcattggaa aggcggtggg aaacaaggtg 159660 cagggccatt gaggccacac aatcaacaac aggatttgct ccagcctcag agacacagag 159720 tggactggca tactatatca atttggaatc ccctcggcta tgacaagttt gtgaaatgaa 159780 agaacaaaac aatacagtac aagatcaagt tttagtagag agaatgcaga caaccacaac 159840 cqaqtactta gggagaaaaa aaaaaaaccc agctcttagc tggggagtga cagtcaaggg 159900 qqqaaatcac qcqaaggaat ttctttcagg tgcaagaagg catgagagtg ggagacaagg 159960 attgagcatc ttggcagaag gatcagaaac ccagtccaag gtctacactt ccgtggagca 160020 gccgcagaca agcttaggta tccggtgggg ataacctaca gttaagacat cacattacag 160080 acactaggga gccattgtga attacagcca acaggtgaga atcataactt agcggggcgg 160140 acacaacaac caagccgtga tctagagcag gaagcggggg atagacagaa agacaggttg 160200 taatggagga gaccaagcag agggctgcat taaggcagag gcttctgtgc tgaccaagtg 160260 actaacacaa agggcccttg cagaagacca gagatgtcag gggggagaat tccttctgag 160320 ggggcctagt tacactagcc acttgatatt caccgggaag gaggcagaga agctaggagg 160380 gtgggcacaa aggcagtggc tctcttctac ctgaggagag ctggcagctc tatcaatacg 160440 gactactcct aaatgggctg cagtcagccc agaaaaaaaa aaaatcactc aatactctca 160500 ggttacctac cctggctccc aaagctggtt atgcaagaaa tattttgttg ttgttttgct 160560 tttaaaagga gacaactgat gcttgtttta gtattgtttg aactacatca ctcacaaatg 160620 agagactgat aaagagattg acaagtctga ctctagaagc aaacacttcc agtctgctct 160680 catctgccct ccccacttc ctccattctc ctcggcctct accccacaat atgcttgaaa 160740 atagtaggta actgagtttg ttttgtacgg tggttgtctt gttatttcaa gcagggtggt 160800 ccagagagaa aaaaacattt tctggaaaga ttttaactac tggatcataa acaagcgtgt 160860 ggtggccacg cagcaatctt tgtaataacg aatccaagac gtcctggttg tgaagcccag 160920 tgaatgtaat gttagctgaa aagcaccgcc tgacacacct ggaaatgtgc cacgggccag 160980 ctttgtagac tgcgacttca aagggaaact ggagtctact tccgcttttc agtgagttag 161040 aaatgatttt ggctgtattg gtagggcaga accagaaaat aagttttgaa tttgtcataa 161100 taatttacaa aaaccaacca acttgttaag atgcatcctc caagcacaac taagctggct 161160 atagaggcta ttctgcattc tgcatctggt cccctggact gctcaggctt agggtgaggg 161220 aagaaacatg acttaagcca ttacccttat tctgtgggca tttgaagtgg ctgccaggca 161280 cgtgacacca actgttccaa ttggttcaca atgacatcac tttattattc aactctgttt 161340 gcatttcagt ctcctcttt ttcgggggac ttgaggccaa tcctggccaa gtcactttag 161400 aagagaaaga agccagtctt aggtagtcat gaagtgccaa gtgtcttttg tgtctcctag 161460 cctagtttgt aagccgggaa ctggtgacat aaagggctct gtcaacagcg cccgggtgtg 161520

PCT - Sequence listing for submission.txt ctgcttccct cgcagcggga gagggagatt gggaacccag tagaaggtgg cggttcggcc 161580 ttgggtaggt cccaactgac caagttcaat aaaatccctg agagtttgtt ttcaattggg 161640 taagaaaact ataaaatgga aaccgcatgc gagcttacgc tggaacctca tttaaagcac 161700 ttgtacttcc aaaaaaaaaa aaaaaaatgc agaaaacatt tctaatttag tcaagcgcac 161760 tcttctttcc tcgagcaatt agtcttaatt catgtcacct aactactatt tctgcattaa 161820 gcaacgtgac ctctagaacc tacagtaacc ccctttctga tggtgaaagt caattattct 161880 gatttttttc atcttcacac aataagttac cagagaataa actaacttca aaaaagcatt 161940 acagtgtcat gtgtgttcgc ctgttgatat gtgcacacat tcatggcacc tgtgggtctg 162000 tatccagctc ttctactgtg cctgtctctc aattttgcag ctcaacctag agatcaccaa 162060 gtggccagcg agctccatgg atcagcccgt ttctgccctc ctctgtacta agattacacg 162120 caatcatgct gagcctctaa gaacatggcc gctcatggtc tgaactcgga tcctccacct 162180 agcatggcaa acatgttagg aacggggcca tttcctcaac acaaaggaaa aaggcttcct 162240 catgggagag aatgactgga tgggcgagta gacagatgaa aatggacttt tcacaccaac 162300 tggttagaga ccctgttgct tccaggcaca aagcacacca gtttctagta tcagtgggtt 162360 gaaatgcatg tttaagctct ctcatcctta cttggctctt gacaggaaac ttttatggtt 162420 gaactttatt ctgtagaaat gcagtggcat taaccaagca cacaaagcca actcaagcct 162480 aaagtgtgcc catgactcca accctacact cattggttct tgccagaggc aacacgaaac 162540 agtgtataga ctcagaactc tgcccaggcc tgtgaggcag ggccagggct acacaccttg 162600 caaacacaca gcaggctctg cccaaggagc gttcactagg taactatcag ggtggctcaa 162660 gggctgtacg acagacagac cctgcacagg cagggaaagt ttcctggaga cctaccatct 162720 attttcttgt aatctcaact gatgtgttct gccaagtcaa ctattattta tcatttataa 162780 agcagctcct attggcagca tactctgcat atgtttcagc acttcataaa ccctccacgg 162840 tataatcgct tgtggaggag actgggttgc ctggagctgg aatacagacc cacacgcatg 162900 tgagcccgtg taaatgcaca catgaccgtt ccctaccgct ctttcacgag tcatgtcttg 162960 gctctgtagg ccgagtatct ataactaaag ctctctacag gtgtcaaatc aagcaatctt 163020 ggtcctctca gatgtcagct aatggcttag agccccccc ccctaacagt tctatttgca 163080 ttgctaacca aggctatcca ccttagtatc atcatcagtg caagagaagc caaactgcac 163140 acgaagacct ggagagcact tcagagcaca catccgacct cttcctcatc cgagtaccta 163200 gcaagccagt tttccttcct ctcctgtctc cagaagaagt tccaactcca cctcggagca 163260 aagcagcagc tgcagtgact agcagtgact atgcctttgt gactgcgtat cactcatcca 163320 attcacagac tacttagcat cgacttgtat acactttgcc caagaataaa tatttatatt 163380 cccgaaacac agtcgatcga gagcagctga tacagggctg gagatgacag aggcagcaaa 163440 cacaaacaag taagacctcc aggagtgtga gggacagggc tagagacaaa gtaaacagag 163500 gccacaagat cctaggcgct aggtgggggc tactggtacg taagggctgc tggaaagaag 163560 Page 93

#### PCT - Sequence listing for submission.txt

agtcctccgg ggactggctc ccacaaaggc tgcccaatct caagtggtca gctctgggcg 163620 cttgtctaga tggcaatgct gcgtggactc agtgggttat gtatgcgtgt gtacatgcac 163680 atgctaggat aataattaaa aataagaggt catgagtttg ggaggttgga gtttgctcat 163740 gggagcaact ggaagtgggg ggcagagaaa gggctgggag tgacacaggt gtagttcttg 163800 tgtatggtct aaagattaaa ttagagttag ggaaaaaaaa accccacagg aattgggaag 163860 agtgattccc aagccactga cacagcacag cactgcttgc ctgtggaggt gctcctgtgc 163920 catcctcct aatctttatg ttgcacatct taagagtggt ctgtttgtgt atcctctcat 163980 gcatgtatct cctcagcgtt ctcatccacg aatgcttaca ggtgacgtta gcatcagcag 164040 ttggagaaca agatacactg gaaagaaaac attgtaccct gatttgcacc gggaagagga 164100 qaaaqqqaac acgctaagca tataaacatg ttaacggtca agtagagtcc aaatcagatc 164160 ttgccactct tcaaactgaa ggtctgtgat acttaaaagg gggaaaaaac ccattgaaat 164220 qcaqaaggca gagaccatca ctcaaagata ctcatcgctt ggaggtcagt ttatatttgg 164280 aacagtgact tgggattggc caaccatcac tcatgccatt aaagtaatat ttcagtttca 164340 actgttttac atgcatttag catgtagacg tattcaattt atagttgtaa acggtctaca 164400 agtgtaagaa gccgataccc aagcttcgaa tttgtaggtg tttaagtcta agtcccaatt 164460 cataccggca ctacaggtca gcaagtgtat ggtttttaac tttaagaggg cgctcaataa 164520 actcggatag aaaatctggg agcaccaggc cttgttgtga agctactttc aaggcgatga 164580 tcctcatcgc caggaggaag ttggtttata cccatcatag ttcctttaac acaagcaatg 164640 cagaatggcc ttcacaagtg tctcctctaa aatgactgtt taaattgtgt tgtttcaaaa 164700 agaggacatc cacgagccgc atgtttccat tatcccttgg aactggagct acaggcagtc 164760 aagggcttcc ttacttgggt gctgggacac aactctggcc ctcatggtag aacagcaagc 164820 ccaqcaacct ttctagttcc aggattaggt cttaactttc gtggtctctt gatggcacac 164880 agaaattgtc tagaagtcag aggctatgta cgggtggatg atgtacaccc agtcgccctc 164940 caagcaagcc aaatatgaaa gcaatttttt ttttcaaaaa taaaatagca ccacactgct 165000 ctcccaccag gcgtgtagag attttcccca acaaaatatg acacacatca tatctatgat 165060 tgcttctaaa tgaagaagtc tttaaaagtt ttaacttctt aagggccaaa tatcaatgga 165120 tatattccat ataaataaaa attcatcaga tttgtcttca cctattttgg ttgctgtaac 165180 ccaaccaacc aaccaggtag tctctgtctt gttccagtcc cattttcctg gtgcacaaaa 165300 ggactgattt tacttgttag aaggttatcg ggcaattctc tgtgtctctc ttacaagggt 165360 actaagcatt ctcaggaggg ttcaatcttt atggcccaat cactcccctt cgccccaaaa 165420 caatgtcttg atgaccttcc aacacagtca tggcagatta tggtctgtag gctttactgg 165480 tgccaagggc tcctgagaat acaacaccaa agtgatctca tcccaagaag gatgcttcag 165540

PCT - Sequence listing for submission.txt acagacagtc ccacatgctt tcctctactc ctggctcatc ccctgtattc catacatcta 165600 tatcccccgt ccctcttagc tctcctctga gtggcaaaga ggcatctccg acttaacgag 165660 atgcaaggca gagttctagc tccatctgcc atccccacca cacacctccc aaacaaacct 165720 actcccttcc tcctgccagc tcgggaacgg gcaacttcac ttctcgtttc atctaagcca 165780 aatgcctgaa tcatccttta tccctctttq ccccacctqc aagatttcac aagtccctaa 165840 atattcctga atctatctac tcttagttac tgtaactgat gggtgcagtt ctcaacaagg 165900 aactcttctg tcccggcact acctgcatcc agccatgtct agatacattt ttcaattqtq 165960 tctgcgtaga caaggggtag atgtaccacc agtatctagc aggaagatgc atagacaaqg 166020 ggtagatgta ccaccagtat ctagcaggaa qaqqccaggq atattgataq acattctata 166080 atgcacacag cagctcctat catcaaagac tgtccagctc aaaatgtcaa tggcattgag 166140 aaactgagct ctattccaag ccagtagaat ctctccaaaa aaaccttctc aaaacaactt 166200 cctaactgtt ttccctgatt tttcactctt aattgctctg ctcgatgaaa acaactaaag 166260 ttatcagcag aaatacagag tgtgacccac tagagtgctt tgtcttgtgt catggcctgt 166320 aggcccttgc ctactccact ggccccggc cagctcctac attctcatcc caccaaattc 166380 ctacgtcaga gccctaagcc ctcaggtgac tctgctagag acagactcta cggtagtaac 166440 tgaaggttaa gtgagcccgt aaggaggaac tgagccttgt aatggttggt gccttcatga 166500 aagacacacg gaagcttgct ctctcatcca ctctgctgtq aagcttgctc tcccatccac 166560 tctgctgtga gaagatggcc atccacacag aaaaaggacc tcactggaat ttgaccttgc 166620 tggaactctg atcttggcct catagttcta ggactttgag aaaagaaacg tcagcagctt 166680 aagccaccca ggctgtggta ctttgttgtg aaagcttgga ctaatacatt caaccttgct 166740 accttgccaa gttccagttc actggccatc agtccactta caccacagcc cttgccctcc 166800 ctcttctgaa ctgccattag ctgaccccta ataaccccta gtcaaaatgc caccctcccc 166860 aggagggact gtgttactcc atccttcctg gattttgagg acagccccat ggttggcatt 166920 aaccaagctg cctaccctct ttgcttactg gtctccttga cccagtgcag aaacctctca 166980 gtcttgcccc ttgtcgaatc aggataagat aatctgtgtg gcttatatct cttaaactca 167040 aaacaaggaa aggtaggggg tctgtgaaca tgctttgccc catgacccag ttccctctgc 167100 cycttctcca aagagagcta ccatacttat gcctacctta gtttcccaag agcccatcca 167160 gggcaggagg gaatcattac atgtaacatc tagaatgagt acttccttat attctttcac 167220 tttagggagc agcaaaggtt caaggttacg gtaaagtaca qqtatggggg catcaccctg 167280 atatgatgaa gcaccaagga actccccaat gttaactatc tagccacaga gcaggtaagg 167340 gtatgctcca gttagtttta cgaggtcaac tctgaacaga ggaaacaaaa gcaagcagta 167400 aaggactatg aggcacgtgg gtttgtgctg tgtacagccg agcagtcaca gatgcctcac 167460 taaqqaggtg gcatggggac taagagtgac tggagttagc catgggaaat tcaggcaaaa 167520 agcaaggaag gtctctctga actggtgagg aacagcagtc gtcagtcagt attactgtcc 167580 Page 95

#### PCT - Sequence listing for submission.txt

gttatttctc tacactggcc ccaggcaggt gcttttgaat gactggctgt ttgcaaaggg 167640 aagtccagat acagatggcc gaatgagggg ccacgagcct gtgcaggaca tacagataat 167700 ggaacaggaa ccttgcaatg ctgagaccta ctacgtgacg ggtgcttaac agcttttgag 167760 gttaacggtg ggaatttctg agagaatccc aaagagagct agctggttgc ttgaggccaa 167820 caagggcaag gcttataagt caggggcacc ccagaaagga ggcacacccc agaaaggagg 167880 cagcttctaa gaaagaggaa aagagagaaa gcaggcaagc ctgagaaatc aggcttgggt 167940 ggcctgaaaa ggcagaccat gatgtgtgtg gtgggaaagc agggcaggac tcctcctct 168000 tctggaggaa tacatgtgct ggcactggga catccagctt caaccccagg agcccaggcc 168060 cagcatgacc tcctaacgca ctgtttagta gacagggtag agcctttaag aatggtggct 168120 cgatggaggc cctgtcccat cctccaagat gtctaaaggg ggtgggactg gctaagtccc 168180 tccttctctt cctcaccccc tccacatcca acctcctcca aaaacatcaa atattttctt 168240 ccataaataa ttgcaacagg atgccattgc tttcctcaaa gaaacaatgg cctgattgtg 168300 ccctgtccga cacgggccca gccccagcac acacaaaggg tggctttcag aagccctgct 168360 gtagagaatg ggggtacacc tcctttcttc tcttctgtac caagtccact gccctccacc 168420 aggaaaggac atcaggaagg ggctgctacc acaggaataa ttcccatcag aggacagcta 168480 tcattcacct gcctttagat tgccctttgg ccacctctag aaagttcttc gttctggtga 168540 acagaagagc acctattggc tctaaaatcc aacacacaca cacatacagt tttaggctgg 168600 agatatctat aattttttt tctaattttc aaacttattt gaaattgtca ttaattaact 168660 tttaaaatat ttgaaatcct agcattcagg aggcagaggc tggacaattg ccccacattt 168720 gaggccagtc tggtatacac tgcaagttta ggtcagccag gcctatgtag tgagctcctg 168780 tctcaaaaaa aaaatacata agtaaataaa aattataaat agataataaa atagtcccat 168840 tttacgtgta catcttcagt ttcacaattt gagataaagt gaatacagat attttcattc 168900 agtatctgtg gtagtgccaa cactggatgc tcacacaggc tcatgcatgt gaacatctgg 168960 tccccgtggc tggcacagtt tgggaaggtt atggaacctt taggaggtgg agtcttgctg 169020 gaagaagtga gctaagccac tgggtgcaga ctcggaggct gatagctggg ccccacttcc 169080 tgtccgctct cctgtttctt caccccactc cacttcctaa gtacaggaag cgcttcatct 169140 agcttcctgc ccctgccacc acagcatccc agattaattc catggaaact ctaagtcaaa 169200 ataagccctt tattacttaa gttgtttttg taacactaat caagtgtgtt tcttggttaa 169260 aaaggacagg ctggactaaa ggattcaatt tcagcactta aggggctgga gagatgagag 169320 agcctgctgc tggggctgtg ggctgggata agttgaggcc cgagtttagt tctcagcacc 169380 catgtttggt tcccaacatt ccatgttcac cccaggcctc caagggcctc cacacacata 169440 gatataccca ccctgagata ttcgcatgca tataaataaa cataaaataa atatttaaag 169500 aacccatcac tttgcagcca tggcttgaca aacaggctct ttggtgtctt cctcacatag 169560

PCT - Sequence listing for submission.txt gtgcaagagg aactcaggca ggggtgttga gtttttggat tttgcactta tttatttatt 169620 tattggtggt actctctgtt tattggggga gttgtggtgg gttgccattt gtaacatttc 169680 cattaaagat gttaaaaggc tgccttccca ttttcaaaga ctcagactga tcactctccc 169740 agccagaggc ttctgtcagc tactaaaggg ttcctttccc ttctatttta tggcctttct 169800 cccatccact tctgctttgt tcttttaatt aaaatgaaat gtaggccctc catggctgag 169860 atgctaataa ggcccctgaa agtcatctgt gagcacatcc actcttgttt aaagagccat 169920 gtaaacagac cacagacggc tacagagagc aacgctgcac agggcaagga aaagggaatc 169980 tggctgcacc gtacagtgct acgttgaagt gatttatcac ttatgccagg aggaggaact 170040 gaaacacaaa cgcaatttca agtttaagca tggcgtctcc acaggatctt ccatagcaag 170100 cactctgcac tcgggggctc cctgtcagga aactcctgga caacggttgg tttgccgtct 170160 gatccacttc agttacctca ccaaacattc aagaggtact ttctgatgtg tgtgggcttt 170220 agcgctaggt tgatacaaaa cagtacctgg atctgtactg gaagtcaact atatttgctg 170280 ccaaatccat tgtaactggc tctgcatgga gccatccgtg tgagagaggc tgatgtgtct 170340 gccaccactc tgcagacact ggaaacagcg caggaccaat ctgtatccat cgttcctacc 170400 tgtttctcag tgggtaacat tctcaaagca ttttcagatg aagaatttag tcagacagac 170460 agacagatgg agacacggat cactggaaga ctgctgtatg gggccacatg gggaaacact 170520 gggttagtca ggaagacacg gcggtttcta cagggaaagt ctgggtgtcc ctttggagtt 170580 cttgtgtgag aaagttgtcc ccaaggtatc agtgctggga gatacaagtt ttttgggttt 170640 ttttgtttgt ttgtttgctt gtttgtttgt ttgtttcaag acagggtttc tctgtgtagc 170700 tctggctgtc ctggaactca ctttgtagac caggctggcc tcgaactcag aaatccgcct 170760 gtctctgcct cctgagtgct gggattaaag gcgtgcgcca ccacgcccag gtgggagata 170820 caagttttaa gaggtgggcc tggtgatagg ttcttaggcc actgggtacc ctgtcctcag 170880 agattaaggt aattctcaca agagggctag agaaacgggc caagtgtgac ctctctccac 170940 atctgcttct tatgtttact tgctctcagg ttcctgtcac tgactcgagc aagagcaacc 171000 cttaccatag ctgcactatg atgtttggac ttcaaaacca aactctggac attaactaag 171060 atttctcttt ttaaaatcag taatacactg ttgactaaca atgaatgaat gaagcagagt 171120 aagtaggctg aggatggact ggttcaagtt atcttggcag gcagtgaagt tgggtagtgt 171180 acggcttccc tggcatgtgg ccctagggag accaggacag aagaatattg acgcagagtg 171240 tgagaggcca atcaaggaag tgtgggggct gagatatgtg cttctttact acctaggaat 171300 ctacgagaat ctcttcaggc tcagtcgagg ccccccaaac ggcaagcctg tctaagtaca 171360 ggaaacaggc aagattaata tggaatagtg gcgcaaacca attagctcaa aaatttccac 171420 aaccccatgt attagccctc tgctcagctc agggagataa tgagaacaca taacggaagc 171480 tcccagttca ccaatgcaac tggggagcgg ggggggatgg gtacctcaac cactcttaat 171540 gagtctgtag actaagataa cagaatggca gtcttccatc aacatgaggt aaagctagca 171600 Page 97

#### PCT - Sequence listing for submission.txt

tggcacctca gcctttcaaa gttactgttc actgaaatgt tattagaaaa attgccaatt 171660 gtgataaagc ctatggatca aacactactc ccattgcaag gaacattcat aaacagaaag 171720 ctgttgtcag tccccgaaac ttaaactgta tagagcagag aaaacctgga agagggaagc 171780 gccataatac ggatgagaaa acagggctag gggctcgtaa atggcagatc aggaaggaat 171840 cccatccgcc ttggagttgg tgatcttgta atgttcagag aatggactca tttcaactca 171900 caggttcggt gtgacccacg tgcttgctga agcaccgtgc ttactgtatg gtgctacaca 171960 agtgaggtct ctcataagct gcagagacac agaaaagtct caagggacag gtgggtgcat 172020 gtgtccaaga cctggtcgag cagttaatac gtccaggttg tggcttgtgc tctgcttcat 172080 tagtgtgttg ccagcgacta ggaatgtgac ggctaccacc ttgctgtttg gactcatttc 172140 atggggtaac tgcagcaggc acagggaatg agctaagaca gaccctgggt gagggaggca 172200 gctcatcttc aatgcccgga gagcacaacc tatctgatct gatatactct ccagtttaca 172260 aactactgac aatcacatca agtgaagggc agctgcagcc acagctctcc cttgttcaca 172320 gtttgctttc cttggttcta gttacctgaa ggcaactatg acataacaat attaaatgga 172380 aaattacaga aataaagtag ttccttggcc tcaagttgcc tgccactgga agttacagga 172440 agccatcttg ttgtcctgct ctgtaagggt cctccctttc tgcaacggat ccaggctgta 172500 tacccaacca tcggctagcg acgtcataga gatctgagta gaacaagtgc tgttgttcaa 172560 gtacccctga ctttacttaa cagtgacccc caaacgggaa aaagagtagt gttggcaact 172620 tattacagcc aaaaacatgt tattacaatg tatttttatg actgctgtat tgatactgtt 172680 aattgctggt tataattaag cttcgttata gatacgtatt tataggaatt agcagcatac 172740 atcaggtttg gtggtattta tggtttcagg aatctactac agatctttga aagtatctcc 172800 ctcacaggga gagagactac tgtaccattg ctcttcaatg gtgactccta atactggcat 172860 atagacagct ctgctgacct tttagaagtg ccagagaaca ggcactctgg acacagcgct 172920 gctcttggcc tcgagggatc tgcaagaagg aatggaggga aggatatgtc tctggggacc 172980 agcttctcct ttgaacatgc aggaactaat gagacgcttt ttgaaggagt ccaggtgagt 173040 gacacctatt aaaggtgctt agttaatgct catccccata aacgcccatt acggcgacag 173100 gttcccacta ctcagccgga acgtttgagc tctagatgct cctctgaaga aatggctgaa 173160 aaatcaggga gagatgctaa acccaaacac agtagcagtg ctggcaggag atgagccagg 173220 ctggtgagct gttcgtaaac cagctgtccc cgcccccaag actggagagt acagagaatt 173280 ccatgcaccc agggtcgtct taagacatga acatgctttc agagctgcat ccctaagaaa 173340 ctcctacaaa cctgctccag accatgaccc tgcaggctct gtctcacccc tgcccttcca 173400 ctcagctgct cctgagttac agcctggcta aaatagcaat gctacatttt ctgccatttg 173460 ggggccactg aggcaaatga tcatgttgaa ggggtaactg gctattcact caaacctctg 173520 cattcctcag tgagaggaca gtctcagagg atcccaccag gatgtgctgg ctctgcatgg 173580

PCT - Sequence listing for submission.txt tgggtgtcag aactacattc gatttgcagg taccatatgg tgtttgcggg gctggaaccc 173640 tgcttgtggg tattgaaaat cacgtactgg gagtcaggag cgttgtgagt acaaacattt 173700 cagagtgttg agagtgcttg gtgggggttt aggaacaagg caggctctga cttaccagaa 173760 ctgcagcttt tattctgaag tttcttttaa gaaccaagat taggggctgg agagatggct 173820 cagaggttaa gagcacccga ctgctcttcc gaaggtcctg agttcaaatc ccagcaacca 173880 catggtggct cacaaccatc tgtaatgaga tctgactccc tcttctgggg tgtctgaaga 173940 cagctacggc gtacttacat agaataaata aataaataaa tctttaaaaa aagaaaaaaa 174000 gctctcgaga acatgacagg gtggggtgtg cagataagaa ggctctagct agggtagctg 174120 gaatccctct ttcaacgatg gcgaagcact ggcacccgta gaaagaagga atgatacgaa 174180 tcagcccact attctgaact atgtccctgc ccagacacag aggcacatgc tgggcctgca 174240 gcaaatagcc ctggagccac actcgtggtt ggcgtgcaga ggaggaacca acccatcaga 174300 actctgtccg tgtgggtgtg tgtaggtgcc tgtggtgaag gtcagaggtc aactcaggtg 174360 tccaatccag gctccttttg aacttctagc ttagtttgtc aacactggca gctgaattgg 174420 gtttgtttgt ttgttttttg agatgtgatc ttgatctgca gcccaggctg ggcttgaatt 174480 174481 c

```
<210> 7
<211> 5293
<212> DNA
<213> Sus scrofa
```

<400> 7 60 aaagggaatt tcatcccaaa taaaaggaat gaagtctggc tccggaggag ggtccccgac ctcgctgtgg gggctcctgt ttttctccgc cgcgctctcg ctctggccga cgagtggaga 120 aatctgcggg ccgggcattg acatccgcaa cgactaccag cagctgaagc gcctggagaa 180 240 ctgcacggtg atcgagggct acctccacat cctgctcatc tccaaggctg aggactaccg 300 cagctaccgc tttcccaagc tcacggtcat caccgagtac ctgctgctgt tccgtgtggc tggccttgag agccttggcg acctcttccc caatctcacg gtcatccgcg gctggaagct 360 cttctacaac tacgccctgg tcatcttcga gatgaccaac ctcaaggaca tcgggctcta 420 480 caacctgagg aatattaccc ggggggccat caggatcgag aagaatgcyg acctctgcta 540 cctctctacg gtggactggt ccctgatcct ggatgccgtg tccaataact acatcgtggg 600 caacaagccc cctaaggaat gcggggactt gtgcccaggg acgctggagg agaagccgct gtgtgagaag acgaccatca acaacgagta caactatcgc tgctggacca cgaaccgctg 660

<sup>&</sup>lt;220> <221> misc\_feature <222> (3177)..(3178) <223> n is a, c, g, or t

200	c linting f	on cubmissio	n tyt	
ccagaaaatg tgcccgagcg tgt	· Sequence listing f gcgggaa gcgggcgtgc	acagagaacc a	acgagtgctg	720
ccaccccgag tgcctgggca gct	gcagcgc acccgacaac	gacacrgcct g	gtgtggcctg	780
ccgccactac tactacgccg gag	gtctgcgt gcccagctgc	ccacccaaca o	cctaccgctt	840
cgagggctgg cgctgcgtgg acc	cgcgactt ttgcgccaac	atccccagtg (	cggagagcag	900
tgactccgag ggctttgtga tc	catgatgg sgagtgcatg	caggagtgcc (	cttcaggctt	960
catccgcaat ggcagccaga gc	atgtactg tatcccttgc	gaaggccctt (	gccccaaagt	1020
ctgtgaggaa gagaagaaga ca	aagaccat tgattctgtc	acttctgctc	agatgctcca	1080
aggatgcacc atcttcaagg gc	aacctgct cattaacatc	cgacgcggca	acaacattgc	1140
ctcggagcta gagaacttca tg	gggctcat cgaggtggtg	acgggctacg	tgaagatccg	1200
ccactcccat gccttggtct cc	ttgtcctt cctgaaaaat	cttcgccaga	tcctagggga	1260
ggagcagctg gaggggaatt ac	tccttcta cgtccttgac	aaccagaact	tgcagcagct	1320
gtgggactgg gaccatcgca ac	ctgaccat caaagctggg	aaaatgtact	ttgctttcaa	1380
tcccaaattg tgtgtctccg ag	atttaccg catggaggaa	gtgacaggga	ctaaagggcg	1440
ccagagcaaa ggggacataa ac	accaggaa caatggagag	agagcctcct	gtgaaagtga	1500
cgtcctkcac ttcacctcca co	accacgtg gaagaaccgc	atcatcatca	cctggcaccg	1560
ataccggccc cctgactaca go	gacctcat cagcttcact	gtctactaca	aggaagcgcc	1620
ctttaaaaac gtcacggagt at	gatgggca ggatgcctgt	ggctccaaca	gctggaacat	1680
ggtggacgtg gacctccctc co	aataagga cgtcgagcct	ggcattctac	tgcatgggct	1740
gaagccctgg acacagtacg cy	gtttacgt craggccgtg	accctcacca	tggtggagaa	1800
tgaccacatc cgtggggcca ag	gagtgagat cttgtacatt	cgcaccaatg	cttcagttcc	1860
ttccattccc ctggatgtcc to	ctcagcatc aaactcctct	: tctcagctga	tagtgaagtg	1920
gaacccgccc tccctgccca a	tggcaacct gagctactac	atcgtgcggt	ggcagcgcca	1980
gcctcaggac agctatctct a	ccggcataa ttactgctc	aaaggtgagg	gggacatggg	2040
acacctgtgg ctctgactcc c	gagccctat gctacgcat	cagcatcagg	ctgctgctgt	2100
gtgcagcctt ggccatggtc a				2160
acttggctct ccttgggctg c				2220
tgatggcacc attgatgtcg a				2280
ggagaaggga ccatgctgtg c				2340
ggaggctgag taccgcaagg t				2400
acctgaacgg aagcggaggg a				2460
cagaaacacc acagtggtgg a				2520
gtaccctttt tttgagagca g				2580
gccttttact ttgtaccgaa t				2640
ctgcagtgcc tccaactttg 1		t gcaggtatgg		2700

## PCT - Sequence listing for submission.txt

tcactccatt cctaattcac tcacagcctt gatttgtaca gatggaggct gacacc	cagg 2760
gcaatgaccc ttactctcag tcctgcttat taaagaatga gtggtctttt gtaggc	agct 2820
cactagtcca gcagcccagg aatggagttc attcatagca accccactct ctcccc	agtc 2880
tctccataca gagtgcttga gagcagggaa ctcaattcag ggtctacact ttccct	ctcc 2940
ttggttcatg ttgtgcattg ccgtgggccc ttttttttgc ccatttatgc aaaggg	aaat 3000
ttgccaggtc tctcctgagt tctcagagat tctgtgaaat cctcagttgg ctgccc	tgaa 3060
tcaaagtgag tgtagctcct gaaggtcagc tcccagagca gcttcgcgtc ctgctt	gttt 3120
ggtcctcacc ttcctcttct tttagaagct acctgtggcc cagacagcaa gccatc	nnaa 3180
aaaaaaaaaa gaaacctact gtgtatgtga ggtcaggtca	gtac 3240
cgtctgcagt cctgtatgca tggttgaaga gggtattctt aggtttaatc cagcat	tttt 3300
tgtctttttt gggggacttg agtctaactt cattgcttgt ttcaattgtt gcacag	yaagg 3360
agcagatgac attcctgggc cagtgacctg ggagccacgg cctgagaact ccatct	tttt 3420
aaagtggcca gaacctgaga atcctaatgg attgattcta atgtatgaaa taaaat	acgg 3480
atcacaagtc gaggatcagc gggaatgtgt gtccagacag gagtacagga agtatg	ggagg 3540
ggccaagctg aacaggctca acccggggaa ctacacggcc cggattcagg ccacct	ctct 3600
ctccgggaat gggtcatgga cggaacctgt gttcttctac gtccaggcca aaacga	acata 3660
tgaaaacttc atccatctga tcatcgccct accagtggcc gttctgttga tagtag	ggagg 3720
gttggttata atgttgtacg tcttccacag aaagagaaat aacagcaggc tgggga	aatgg 3780
agtgctgtat gcttccgtga acccggagta cttcagcgca gctgatgtgt acgtg	cccga 3840
cgagtgggag gtcgcccggg agaagatcac catgagccgg gagctgggac agggc	tcctt 3900
cgggatggtt tatgaaggcg tcgccaasgg ygtggtcaaa gatgagcctg agacca	agggt 3960
ggccattaag acagtgaatg aggccgccag catgcgygag aggattgagt ttctc	aacga 4020
ggcctccgtg atgaaggagt tcaactgtca ccacgtggtg agggaagggc cccaa	gggtt 4080
gggrccaccc ttatgggttt gcgactcatc ctgtctctgt aggatcccts tcact	gctca 4140
agaaggttgg gggggatgtg caggtccagg gagtctggtg ccacatcatc caggg	ttgct 4200
cagggtggtc ctggtggggt tggggggctg cgggggctca ccccctgtct ccttc	tcttt 4260
cccctcaca ggtgcggctg ctgggtgtgg tgtcccaggg ccagccaacg ctggt	catca 4320
tggaactgat gacccggggg gacctcaaaa gttatctccg gtctctgaga ccaga	aatgg 4380
agaataatcc agtcctagca cctccaagcc taagcaaaat gatccagatg gctgg	agaga 4440
tygcagatgg catggcatac ctcaacgcca ataagtttgt ccacagagac ctcgc	tgccc 4500
ggaactgyat ggtggccgaa gacttcacag tcaaaatcgg agattttggg atgac	gagag 4560
acatctatga gacagactat taccgcaagg gagggaaagg gctgctgcct gtgcg	ctgga 4620
tgtcccctga gtccctcaag gacggagtct tcaccacgca ctctgatgtc tggtc	cttcg 4680

PCT - Sequence listing for submission.tx gggtcgtcct ctgggagatt gccacgctgg ccgagcagcc ataccagggc ttgtc	ccaacg 4740
agcaagtcct tcgcttcgtc atggagggcg gccttctgga caagccggac aactq	
acatgctgtt tgavctgatg cgcatgtgct ggcagtacaa ccccaagatg aggco	
tcctggagat catcagcagc atcaaggayg agatggagcc tggcttccgg gagg	
tctactacag tgaggagaac aagccgcctg agccggagga gctggacctg gagc	
acatggagag cgtccccctg gacccctcgg cctcctcgtc ctccctgccg ctgc	
gacactcagg acacaaggct gagaacggcc caggccctgg cgtgctggtg ctgc	gagcca 5100
gcttcgacga gagacagcct tacgcgcaca tgaacggggg ccgcaagaac gagc	gggccc 5160
tgcctctgcc ccagtcctcg acctgctgat cctggatccc gatcccgtgc aaac	agtacc 5220
gtgcgcacgc gggcgggcgg ggggagagtt ttaacaatct attcacaagc ctcc	tgtacc 5280
tcagtggatc ttc	5293
<210> 8 <211> 22 <212> DNA <213> Mus musculus	
<400> 8 ggagatcatc ggcagcatca ag	22
<210> 9 <211> 21 <212> DNA <213> Mus musculus	
<400> 9 gccattctca gccttgtgtc c	21
<210> 10 <211> 21 <212> DNA <213> Mus musculus	
<400> 10 gcatgtgctg gcagtataac c	21
<210> 11 <211> 21 <212> DNA <213> Mus musculus	
<400> 11 cagaggccca tgtcagttaa g	21
<210> 12 <211> 21 <212> DNA <213> Mus musculus	
<400> 12 agagtggcca tcaagacggt a	21

## PCT - Sequence listing for submission.txt

<210> <211> <212> <213>	13 19 DNA Mus musculus	
	13 agag accggagat	19
<210> <211> <212> <213>	14 20 DNA Sus scrofa	
<400> cctccg	14 tgat gaaggagttc	20
<210> <211> <212> <213>	15 20 DNA Sus scrofa	
<400> tcagtt	15 ccat gatgaccagc	20
<210> <211> <212> <213>	16 20 DNA Sus scrofa	
<400> cctccg	16 tgat gaaggagttc	20
<210> <211> <212> <213>	20	
<400> tcagtt	17 ccat gatgaccagc	20
<210> <211> <212> <213>	19	
<400> ggagta	18 tgat gggcaggat	19
<210> <211> <212> <213>	19 20 DNA Sus scrofa	
<400> gaagca	19 ttgg tgcgaatgta	20
<210> <211> <212>	20 12 DNA	

242		sting for submission.txt	
<213> Mus muscu	itus		
<400> 20			
tggagatgga gc			12
<210> 21 <211> 17			
<211> 17 <212> DNA			
<213> Sus scrof	Fa ,		
<400> 21			
aagatgaggc cttcc	ctt		17
<210> 22			
<211> 20 <212> DNA			
<213> Sus scrof	fa		
<400> 22			
gatcagcagg tcgag	ggactg		20